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Soft-plumaged
petrels'

Birdwatching
from cargo ships

Short-toed Eagle

Wetland birds in
the fossil record





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- We aim to: ❖ provide a forum for contributions of interest to all birdwatchers in the Western Palearctic;
❖ publish material on behaviour, conservation, distribution, ecology, identification, movements, status and taxonomy;
❖ embrace new ideas and research; ❖ maintain our position as the respected journal of record; and
❖ interpret good scientific research on birds for the interested non-scientist.

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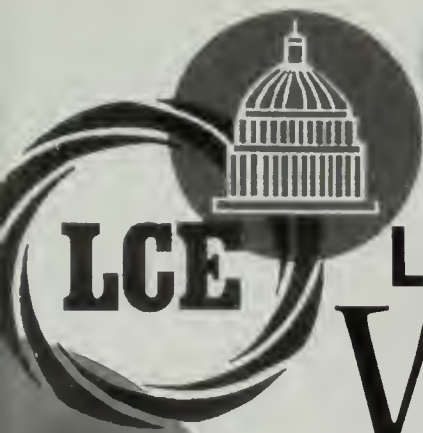
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The *British Birds* list of English names for Western Palearctic birds

It is now 11 years since the list of English bird names adopted for use in *British Birds* was fully reviewed and updated (see *Brit. Birds* 86: 1-2), although a small number of alterations were made in 1997 (see *Brit. Birds* 90: 343). The English names of birds has been a highly controversial topic during the past decade or so, and though it is not one which we wish to use up large chunks of *BB* in debating, there are several good reasons why it is now appropriate to examine our practices and publish an updated list.

Taxonomic developments have necessitated the creation of a number of new names in recent years, as a result of species 'splits', and this is one key factor driving the changes we propose. We also feel that it is appropriate to review some 'new' English names which have simply not become widely used at any level of ornithology in Britain. Names such as 'Tundra Swan' (*Cygnus columbianus*), 'Hedge Accentor' (*Prunella modularis*) and 'Rufous Nightingale' (*Luscinia megarhynchos*) have been almost completely shunned, and we feel that there is now little point in persisting with them. Furthermore, the BOU has recently proposed a new taxonomic order (www.bou.org.uk/recbrlst1dna.html), in which Anseriformes and Galliformes are placed at the start of the list. It seems that this order is likely to become widely adopted in the coming years and, since no other changes are envisaged in the foreseeable future, we propose to replace the Voous order currently used with this new one. Allied to this, a number of modifications to the scientific names of some species have also recently been proposed by the BOU (www.bou.org.uk; *Brit. Birds* 95: 597), and in reviewing our list we have taken the opportunity to embrace these too.

In 1993, the *BB* Editorial Board published the list of guidelines (see Appendix 1) which it had followed when making decisions on changes to English names. Those six guidelines, eschewing the principle of 'minimum necessary

change', are still entirely relevant, and we have used them to steer us in the changes we propose. So, for example, and with reference to principle 4, we feel that there is a sensible case for modifying the names of species such as Zino's *Pterodroma madeira* and Fea's Petrel *P. feae*, as well as the species named in the preceding paragraph, by adopting a more 'widely used alternative'.

While we have little doubt that some will criticise at least a few of our decisions, we feel that a list of English names which is universally agreed and entirely accepted will perhaps never be realistically attainable, not least because each organisation and publication which chooses its own names will have slightly different objectives. We feel that the changes we propose are pragmatic and appropriate for the journal *British Birds*, and that the majority of our readers will agree with us. When the scientific name of each species is quoted (as it is in *BB* the first time a species is mentioned in a paper, note or other article), we feel that there is no significant danger of misinterpretation when species such as *Anas chipeata* are referred to as 'Shoveler' rather than 'Northern Shoveler', even though many of the names are simpler than those proposed for international use beyond the Western Palearctic. We still believe that the *BB* list is a good template for national lists within the Western Palearctic, county bird reports, and so on.

We wish to emphasise that we believe the vast majority of the changes instigated in 1993 by the then Editorial Board were eminently sensible and well thought out, and we applaud them for introducing many forward-thinking ideas. The changes announced here are simply fine-tuning the 1993 list on the basis of subsequent experience. Furthermore, we do not see these names as being 'cast in stone'; on the contrary, we expect that there will be small changes on a somewhat regular basis, mostly as a result of taxonomic developments, and we propose to review our list annually. In addition, and as

acknowledged 11 years ago, we look forward to recommendations on this subject by the International Ornithological Congress, which are apparently still being considered.

We anticipate some changes even in the fairly near future. For example, and as already acknowledged (e.g. *Brit. Birds* 96: 578), we recognise that our position on the large white-headed gull *Larus complex* is unsatisfactory. Rather than make interim changes, however, we have opted to wait for BOURC guidelines on the taxonomy of these forms, which we (along with the rest of the nation's birders) look forward to seeing. More generally, we intend to follow the advice of the BOURC's Taxonomic Sub-committee in all matters of taxonomy which affect the British List; and to follow the European Taxonomic Advisory Committee's recommendations for decisions which fall outside the remit of the BOU.

Format of the BB list

In the past, we have produced a printed pull-out version of the BB list of English names as a reference for readers. Since we assume that our list will be modified as required, as suggested above, we will not produce a printed list at this stage, but will consider doing so at the end of this year depending on comments and suggestions from readers. Readers should therefore

assume that names are exactly as published in the 1997 list, unless referred to in Appendices 2-4 below.

For the time being, we propose to maintain the BB list on our website, in a format which can be simply and cheaply downloaded, and to which amendments are easily made. For those without access to the internet, please send an SAE to the BB Editorial Office and a printed list will be posted to you.

Beyond the Western Palearctic

We propose to follow the practice of the 1993 revision by maintaining a list of English names recommended for use in world lists (see *Brit. Birds* 86 (January 1993), p. 9 of supplement, and Appendix 5 below); these fuller formal names may be required on a world scale, but we recommend the shorter versions given in the main list for use in a Western Palearctic context. Still looking at a global scale, we propose to adopt English and scientific names given in the third edition of *The Howard and Moore Complete Checklist of the Birds of the World*, edited by Edward C. Dickinson and published in 2003 by A&C Black (see *Brit. Birds* 96: 532-33 for review), for species which have not occurred in the Western Palearctic.

Eds



Appendix 1. Guiding principles of changes to the *British Birds* list of names (reproduced from *Brit. Birds* 86: 1-2).

A name is changed from current usage only if:

1. The current name creates a real chance of confusion within the Western Palearctic, either with one other species or with a group of species.
2. There has been a taxonomic change necessitating a new name.
3. The present name gives a misleading suggestion of an incorrect taxonomic relationship.
4. A significant improvement upon the current name is provided by a widely used alternative.
5. A helpful indication of relationships is provided by restoration of the group name.
6. An alternative name is already being used far more widely, or is being adopted internationally for a species peripheral to the Western Palearctic.

Appendix 2. Changes to the existing list: new names resulting from recent taxonomic splits.

Eurasian Teal *Anas crecca* and Green-winged Teal *A. carolinensis* (formerly Common Teal *A. crecca*)
 Houbara Bustard *Chlamydotis undulata* and Macqueen's Bustard *C. macqueenii* (formerly Houbara Bustard *C. undulata*)

Eastern Olivaceous Warbler *Hippolais pallida* and Western Olivaceous Warbler *H. opaca* (formerly Olivaceous Warbler *H. pallida*)

Booted Warbler *Hippolais caligata* and Sykes's Warbler *H. rama* (formerly Booted Warbler *H. caligata*)

Asian Desert Warbler *Sylvia nana* and African Desert Warbler *S. deserti* (formerly Desert Warbler *S. nana*)

Western Bonelli's Warbler *Phylloscopus bonelli* and Eastern Bonelli's Warbler *P. orientalis* (formerly Bonelli's Warbler *P. bonelli*)
 Red-breasted Flycatcher *Ficedula parva* and Taiga Flycatcher *F. albicilla* (formerly Red-breasted Flycatcher *F. parva*)
 Pied Flycatcher *Ficedula hypoleuca* and Atlas Flycatcher *F. speculigera* (formerly Pied Flycatcher *F. hypoleuca*)
 Carrion Crow *Corvus corone* and Hooded Crow *C. cornix* (formerly Carrion Crow *C. corone*)
 Lesser Redpoll *Carduelis cabaret* and Common Redpoll *C. flammea* (formerly Common Redpoll *C. flammea*)

Appendix 3. Changes to the existing list: new names resulting from adoption of a more widely used alternative.

Bewick's Swan *Cygnus columbianus* (formerly Tundra Swan)
 Shoveler *Anas clypeata* (formerly Northern Shoveler)
 Zino's Petrel *Pterodroma madeira* (formerly Madeira Petrel)
 Fea's Petrel *P. feae* (formerly Cape Verde Petrel)
 Black-capped Petrel *P. hasitata* (formerly Capped Petrel)
 Yelkouan Shearwater *Puffinus yelkouan* (formerly Levantine Shearwater)
 Eurasian Bittern *Botaurus stellaris* (formerly Great Bittern)
 Schrenck's Bittern *Ixobrychus eurhythmus* (formerly Schrenck's Little Bittern)
 Green-backed Heron *Butorides virescens* (formerly Green Heron)
 Honey-buzzard *Pernis apivorus* (formerly European Honey-buzzard)
 Eurasian Black Vulture *Aegypius monachus* (formerly Monk Vulture)
 Gabar Goshawk *Micronisus gabar* (formerly Gabar Chanting-goshawk)
 Sora *Porzana carolina* (formerly Sora Crane)
 Siberian Crane *Grus leucogeranus* (formerly Siberian White Crane)
 Greater Painted-snipe *Rostratula benghalensis* (formerly Painted-snipe)
 Crab Plover *Dromas ardeola* (formerly Crab-plover)
 Stone Curlew *Burhinus oedichenus* (formerly Stone-curlew)
 Egyptian Plover *Pluvianus aegyptius* (formerly Egyptian Courser)
 Ringed Plover *Charadrius hiaticula* (formerly Great Ringed Plover)
 Killdeer *C. vociferus* (formerly Killdeer Plover)
 Puffin *Fratercula arctica* (formerly Atlantic Puffin)
 White-throated Needletail *Hirundapus caudacutus* (formerly White-throated Needletail Swift)
 White-breasted Kingfisher *Halcyon smyrnensis* (formerly Smyrna Kingfisher)
 Shore Lark *Eremophila alpestris* (formerly Horned Lark)
 Temminck's Lark *E. bilopha* (formerly Temminck's Horned Lark)
 Common Bulbul *Pycnonotus barbatus* (formerly Garden Bulbul)
 Waxwing *Bombycilla garrulus* (formerly Bohemian Waxwing)
 Dunnock *Prunella modularis* (formerly Hedge Accentor)
 Rufous Bush Robin *Cercotrichas galactotes* (formerly Rufous-tailed Scrub-robin)
 Black Bush Robin *C. podobe* (formerly Black Scrub-robin)
 Common Nightingale *Luscinia megarhynchos* (formerly Rufous Nightingale)
 Plain Leaf Warbler *Phylloscopus neglectus* (formerly Plain Warbler)
 Tenerife Goldcrest *Regulus teneriffae* (formerly Tenerife Kinglet)
 Brown Flycatcher *Muscicapa dauurica* (formerly Asian Brown Flycatcher)
 Eurasian Nuthatch *Sitta europaea* (formerly European Nuthatch)
 Grey-backed Fiscal *Lanius excubitorius* (formerly Grey-backed Fiscal Shrike)
 Western Jackdaw *Corvus monedula* (formerly Eurasian Jackdaw)
 Rose-coloured Starling *Sturnus roseus* (formerly Rosy Starling)
 Red-billed Firefinch *Lagonosticta senegala* (formerly Senegal Firefinch)
 Bullfinch *Pyrrhula pyrrhula* (formerly Common Bullfinch)
 Lapland Bunting *Calcarinus lapponicus* (formerly Lapland Longspur)

Appendix 4. Changes to the existing list: new names resulting from changes to the generic or scientific name, as proposed by the BOU. *

Black-browed Albatross *Thalassarche melanophris* (formerly *Diomedea melanophris*)
 Shy Albatross *T. cauta* (formerly *D. cauta*)
 Yellow-nosed Albatross *T. chlororhynchos* (formerly *D. chlororhynchos*)
 Great White Egret *Ardea alba* (formerly *Egretta alba*)
 Greater Flamingo *Phoenicopterus roseus* (formerly *P. ruber*)
 Gabar Goshawk *Micronisus gabar* (formerly *Melierax gabar*)
 Whiskered Tern *Chlidonias hybrida* (formerly *C. hybridus*)
 Alpine Swift *Apus melba* (formerly *Tachymarptis melba*)
 Iberian Chiffchaff *Phylloscopus ibericus* (formerly *P. brehmii*)
 Firecrest *Regulus ignicapilla* (formerly *R. ignicapillus*)
 Ovenbird *Seiurus aurocapilla* (formerly *S. aurocapillus*)

* A number of further changes to the generic or scientific names of birds on the British List were recommended in the January 2004 issue of *Ibis* (*Ibis* 146: 153-156), but were received too late for inclusion here. They will be printed in News & comment in the February issue of *BB*, and incorporated into our list on the website.

Appendix 5. Suggested names for certain species when used in an international context.

Greater White-fronted Goose <i>Anser albifrons</i>	Eurasian Wryneck <i>Jynx torquilla</i>
American Black Duck <i>Anas rubripes</i>	European Green Woodpecker <i>Picus viridis</i>
Northern Pintail <i>A. acuta</i>	Greater Hoopoe Lark <i>Alaemon alaudipes</i>
Northern Shoveler <i>A. clypeata</i>	Greater Short-toed Lark <i>Calandrella</i>
Northern Fulmar <i>Fulmarus glacialis</i>	<i>brachydactyla</i>
European Shag <i>Phalacrocorax aristotelis</i>	Eurasian Crag Martin <i>Ptyonoprogne rupestris</i>
Black-crowned Night Heron <i>Nycticorax nycticorax</i>	Bohemian Waxwing <i>Bombycilla garrulus</i>
Northern Bald Ibis <i>Geronticus eremita</i>	White-throated Dipper <i>Cinclus cinclus</i>
European Honey-buzzard <i>Pernis apivorus</i>	Winter Wren <i>Troglodytes troglodytes</i>
Eurasian Griffon Vulture <i>Gyps fulvus</i>	European Robin <i>Erithacus rubecula</i>
Western Marsh Harrier <i>Circus aeruginosus</i>	Rufous-tailed Rock Thrush <i>Monticola saxatilis</i>
Greater Spotted Eagle <i>Aquila clanga</i>	Common Blackbird <i>Turdus merula</i>
Eurasian Hobby <i>Falco subbuteo</i>	Common Grasshopper Warbler <i>Locustella</i>
Rock Ptarmigan <i>Lagopus mutus</i>	<i>naevia</i>
Western Capercaillie <i>Tetrao urogallus</i>	Eurasian Reed Warbler <i>Acrocephalus scirpaceus</i>
Common Moorhen <i>Gallinula chloropus</i>	Eurasian Penduline Tit <i>Remiz pendulinus</i>
Eurasian Oystercatcher <i>Haematopus ostralegus</i>	Eurasian Golden Oriole <i>Oriolus oriolus</i>
Pied Avocet <i>Recurvirostra avosetta</i>	Black-billed Magpie <i>Pica pica</i>
Eurasian Dotterel <i>Charadrius morinellus</i>	Spotted Nutcracker <i>Nucifraga caryocatactes</i>
Eurasian Woodcock <i>Scolopax rusticola</i>	Eurasian Tree Sparrow <i>Passer montanus</i>
Ruddy Turnstone <i>Arenaria interpres</i>	Sudan Golden Sparrow <i>P. luteus</i>
Black-legged Kittiwake <i>Rissa tridactyla</i>	White-winged Snowfinch <i>Montifringilla nivalis</i>
Atlantic Puffin <i>Fratercula arctica</i>	Red Avadavat <i>Amandava amandava</i>
Common Wood Pigeon <i>Columba palumbus</i>	Atlantic Canary <i>Serinus canaria</i>
Eurasian Collared Dove <i>Streptopelia decaocto</i>	European Greenfinch <i>Carduelis chloris</i>
European Turtle Dove <i>S. turtur</i>	European Goldfinch <i>C. carduelis</i>
Eurasian Eagle Owl <i>Bubo bubo</i>	Eurasian Siskin <i>C. spinus</i>
Northern Hawk Owl <i>Surnia ulula</i>	Common Linnet <i>C. cannabina</i>
Eurasian Pygmy Owl <i>Glaucidium passerinum</i>	Common Bullfinch <i>Pyrrhula pyrrhula</i>
Eurasian Hoopoe <i>Upupa epops</i>	Common Reed Bunting <i>Emberiza schoeniclus</i>

The 'soft-plumaged petrel' complex:

a review of the literature on taxonomy, identification and distribution

Andrew H. J. Harrop

ABSTRACT This paper reviews the literature concerning the taxonomy, identification and distribution of the 'soft-plumaged petrel' *Pterodroma feae/madeira/mollis* complex in the Western Palearctic. There are no known consistent plumage differences between *feae* and *madeira* and, at present, only bill structure can be regarded as diagnostic. A number of consistent differences exist between *mollis* and *feae/madeira* which make field identification of *mollis* possible. To date, all well-documented records of 'soft-plumaged petrels' away from breeding grounds in the North Atlantic are compatible with *feae*; there are no safe records of *mollis* in the northern hemisphere, or of *madeira* away from its breeding grounds.

Two species of petrel of the genus *Pterodroma* breed in the Western Palearctic: Fea's Petrel *P. feae*, with the nominate form on Cape Verde and the subspecies *P. f. deserta* occurring on Bugio, in the Madeiran archipelago; and Zino's Petrel *P. madeira*, in the mountains of Madeira (table 1). In addition, Soft-plumaged Petrel *P. mollis* may occur as a vagrant from the South Atlantic or Indian Ocean. These three closely similar species, hereafter referred to simply as *feae*, *madeira* and *mollis*, have often been described collectively as 'soft-plumaged petrels'. Rare and genuinely enigmatic, the *Pterodroma* petrels of the eastern North Atlantic have both excited birdwatchers and generated a substantial body of literature, especially in the past 20 years. Nonetheless, some aspects of their taxonomy, identification and distribution remain controversial. This paper provides a critical review of the literature to date, in particular that relating to field identification.

History and taxonomy

Archaeological remains found in two cave sites in Gibraltar are clearly identifiable as those of *Pterodroma* petrels (Cooper 1999). The approximate age range of the majority of these specimens is between 60,000 and 25,000 years BP, although none of the specimens has been dated precisely. The remains fall into two distinct size groupings: a small type, similar in size to *madeira*, and the more abundant of the two; and a larger but less numerous type. This evidence suggests the presence of two species, but might possibly represent the size range of one species (Jo Cooper *in litt.*). These remains are believed to be the oldest examples of the genus in the Western Palearctic, and are unusual in that they originate from continental sites, although it is uncertain whether they represent the site of a former breeding colony, or are the result of a seabird wreck. They do suggest, however, that members of the genus were formerly more widespread in the region than they

Table 1. Scientific and common names, breeding distributions and population sizes of the two *Pterodroma* petrels which breed in the Western Palearctic. Population sizes are from Snow & Perrins (1998) for *P. feae* and from Jorge Garzon (*in litt.*) for *P. madeira*.

Scientific name	<i>Pterodroma feae</i>	<i>Pterodroma madeira</i>
Common names	Fea's Petrel	Zino's Petrel
	Cape Verde Petrel	Madeira Petrel
	Gon-gon	Freira
Breeding distribution	Desertas, Madeira Islands Cape Verde	Madeira highlands
Population size	Desertas: 150-200 pairs	45 pairs
	Cape Verde: 500-1,000 pairs	

have been in the recent past.

As noted by Bourne (1983a), the first 'soft-plumaged petrel' recorded in historical times appears to have been collected off the coast of West Africa in October 1768, during Captain Cook's first voyage. No description was published at the time, but an excellent drawing of the specimen by Sydney Parkinson (reproduced in Lysaght 1959) is recognisable as the form breeding locally in the Cape Verde Islands. This was described subsequently as a distinct species, *Oestrelata feae*, by Salvadori (1899), who later published comparisons between *feae* and *mollis*, noting that the southern birds (*mollis*) are smaller, have a grey pectoral band, and have the sides of the body less freckled with grey (Salvadori 1900).

In 1934, Mathews described two new forms which he labelled 'soft-plumaged petrel': *P. m. madeira* from Madeira and *P. m. deserta* from the Desertas Islands in the Madeiran archipelago (Mathews 1934a,b). Subsequently, Bannerman & Bannerman (1965) described *madeira* in greater detail, and made a plea for the continued recognition of *deserta* as a valid subspecies, despite acknowledging that it was difficult to separate from *feae*. Other authors, including Bourne (1957), Jouanin *et al.* (1969), and Cramp & Simmons (1977), considered *deserta* inseparable from *feae*.

Bourne (1957) noted that two forms of 'soft-plumaged petrel' bred within the Madeiran archipelago at different seasons, but felt that 'it would defeat the whole purpose of classification to regard these closely related forms as distinct species'. Later, however, he reversed his earlier view and advocated treating *mollis*, *feae* and *madeira* binomially, as distinct species (Bourne 1983a), since 'it is difficult to say which of the two [*feae* and *madeira*] is closer to the Soft-

plumaged Petrel, showing as the latter does an overlap in its variation in colour'. This treatment was followed by Imber (1985), though he did not provide any additional information in support of this split, other than noting that the species of *Halipeurus* louse supported by *feae* differed from that found on *mollis*. Zino & Zino (1986) provided a thorough account of the biometric differences of the two forms within the Madeiran archipelago. Despite this, and without giving any reasons, Enticott (1991) continued to treat all 'soft-plumaged petrels' as a single species. Zonfrillo (1993), who studied the feather lice of the North Atlantic *Pterodroma* species, inferred sister-taxon relationships between Jamaican Petrel *P. (hasitata) caribbaea* and *feae*, and between Bermuda Petrel *P. cahow* and *madeira*.

Bretagnolle (1995) further complicated matters by suggesting, on the basis of multivariate statistical analysis of morphological (biometrics and coloration) and behavioural characters (vocalisations) of the six populations within the 'soft-plumaged petrel' grouping, that the complex should be split into two species, one breeding in each hemisphere. His interpretation of the data was challenged by Knox (1995), who argued that there were significant differences between the calls of *madeira* and *deserta*. Meanwhile, Hazevoet (1995) established that *feae* breeds exclusively in the higher parts of four of the main islands in the Cape Verde group, while those from the Desertas breed on small, low islets, close to sea level. Hazevoet (1997), citing Nunn & Zino (*in prep.*), stated that phylogenetic studies of *Pterodroma* petrels using mitochondrial cytochrome *b* gene sequences showed that it is no longer tenable to assign *feae* and *madeira* to the '*P. mollis* species group'. Unfortunately, in their

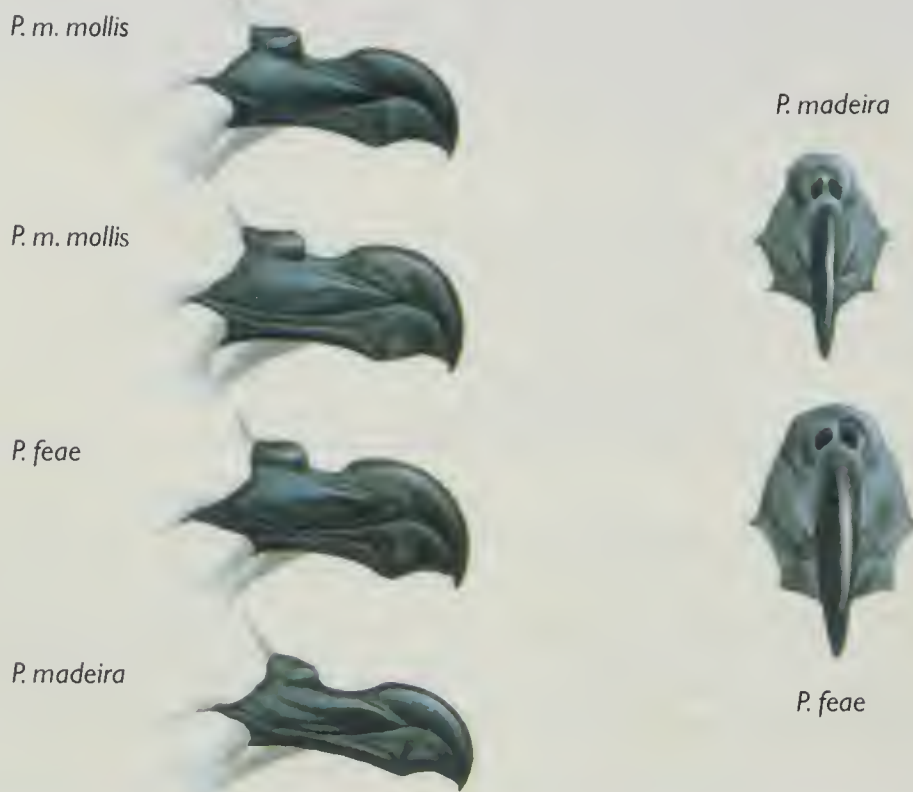


Fig. 1. Bill structure of members of the 'soft-plumaged petrel' *Pterodroma feae/madeira/mollis* complex. Note that most *mollis* are like the uppermost example.

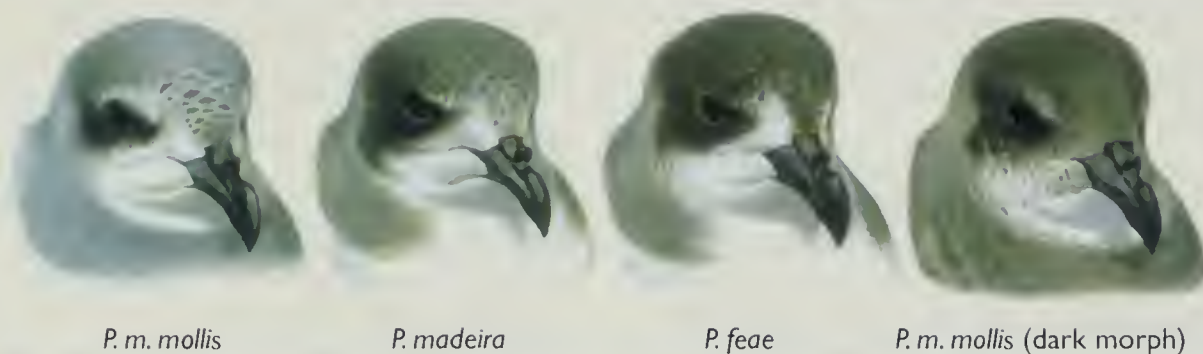


Fig. 2. Head pattern of members of the 'soft-plumaged petrel' *Pterodroma feae/madeira/mollis* complex.

study, Nunn & Zino used a sample of *deserta* but did not include *feae* from Cape Verde, so the taxonomic status and phylogenetic relationship between birds from the Desertas and Cape Verde remains unresolved.

Nunn & Stanley (1998) analysed cytochrome *b* sequences from 85 species of Procellariiformes, including *mollis* and *feae*, and found that these two taxa do not even share a sister-taxon relationship. The following year, the ABA Checklist Committee (1999) accepted Fea's/Zino's Petrel as new for their recording area. At present, the BOU regards all British records as referable to 'Soft-plumaged Petrel' *Pterodroma mollis/madeira/feae* (BOU 2000), although this

is under review. Ratcliffe *et al.* (2000) discussed the relationship between nominate *feae* from Cape Verde and *deserta*. Based upon differences in their morphometrics, their different breeding phenology (laying in December-January on Cape Verde, July-August on Desertas), and the distance between breeding sites, they suggested that the two taxa are effectively reproductively isolated through philopatry and 'are probably' cryptic species. (A 'cryptic species' is one that is genetically distinct but which cannot be distinguished readily from congeners using traditional morphological characters alone.)

Sangster *et al.* (2002) recommended that *feae*, *madeira* and *mollis* are best treated as

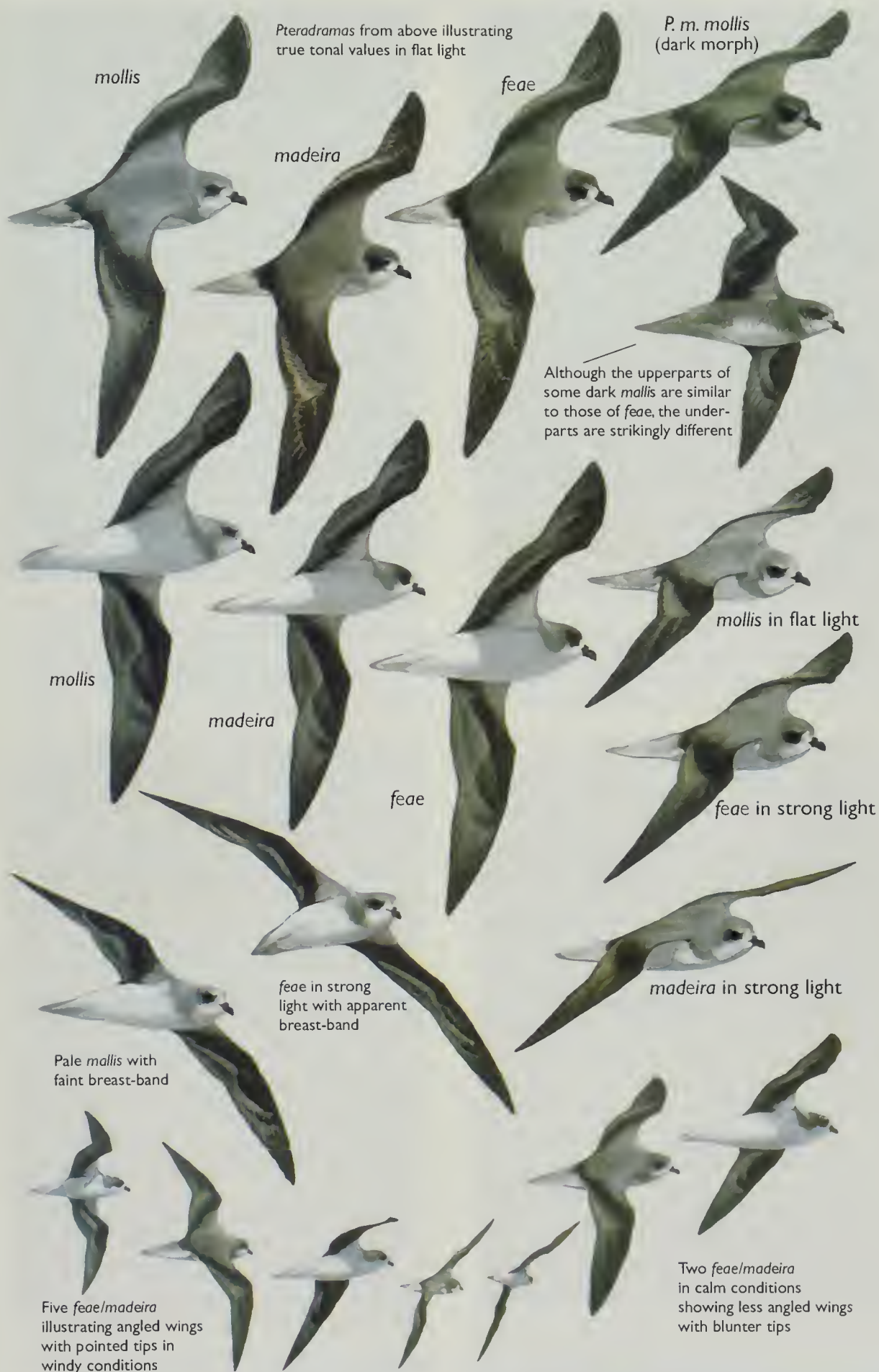


Fig. 3. Members of the 'soft-plumaged petrel' *Pterodroma feae/madeira/mollis* complex in flight. Note that true tonal values may be difficult to judge in field conditions.

distinct species, and noted that analysis of mitochondrial-DNA sequences suggests that the divergence of *feae* and *madeira* occurred approximately 840,000 years ago. They also 'provisionally' retained *deserta* as conspecific with *P. feae*. This cautious approach towards the position of *deserta* is prudent, given that its bill structure does not differ from that of *feae* (see below). Furthermore, differences in morphometrics are small, and there are comparable differences in breeding phenology among populations of both Bulwer's Petrel *Bulweria bulwerii* and Madeiran Storm-petrel *Oceanodroma castro* (Snow & Perrins 1998).

Identification

Given their rarity and taxonomic complexity, and the effort required to obtain good views, it is not surprising that field identification criteria for members of this group have been slow to evolve. Most early accounts focused on distinguishing *Pterodroma* petrels from other seabirds. Even the standard text (Harrison 1983) offered little help in separating members of the complex in the northern hemisphere. It was only following publication of the first photographs of what were claimed as *feae* at sea (Fisher 1989) that real progress began, although as recently as 1998, Anthony McGeehan suggested that the dark morph of Fulmar *Fulmarus glacialis* ('Blue Fulmar') may be an identification pitfall (McGeehan 1998).

Fisher (1989) concluded that the most useful field characters for distinguishing *feae* from *madeira* are likely to be the size of the head and of the bill. In contrast, Carter (1989) noted that the most striking features of *feae* in comparison with *mollis* seemed to be its contrastingly pale rump and tail, and dark crown. Madge (1990) failed to notice the pale tail on many *feae* seen around Cape Verde, however, and this feature was considered to be poorly defined by Harrop (2001).

By the early 1990s, there had been several extralimital records of 'soft-plumaged petrels' from both sides of the North Atlantic (Enticott 1999), although their specific identification remained controversial. Using photographic and other evidence, Tove (1993) concluded that those occurring off North Carolina, USA, were *feae*. Gantlett (1995) discussed the field identification of the complex based on photographs taken off the Desertas, in the Madeiran archipelago, and measured drawings of specimens by

Peter Hayman. Gantlett suggested that *madeira* has a relatively short 'hand' and broader, blunter wing-tip than *feae* (with *mollis* intermediate between the two), and that these differences should be apparent in the field. Nonetheless, he failed to draw attention to the fact that the photographs claimed as *madeira* in his article had previously been published as *feae* (in Fisher 1989). Howell (1996) referred to the same photographs and drew attention to a number of apparent differences in wing and tail patterns which he suggested could be used to separate *feae* and *madeira*, but Zino & Biscoito (2001) were unable to establish any reliable plumage differences. Until such proposed differences are proven, on the basis of photographs of birds of known identity, they remain conjectural. Tove (1997a,b) developed his earlier position regarding the identification of *Pterodroma* petrels in the North Atlantic, and supported Gantlett's suggested differences in wing shape as a useful feature. He also documented 17 individuals recorded from North American waters, and included nine photographs of five individuals.

Brinkley & Patteson (1998) considered separation of *feae* and *madeira* at sea to be feasible on the basis of overall size and, especially, the depth of the bill, although they implied that other potential characters remained to be tested. But, using measurements and wing outlines drawn from photographs, Tove (2001) claimed to have verified the proposed differences in wing shape, and even went so far as to make an analogy with Laughing Gull *Larus atricilla* and Franklin's Gull *L. pipixcan*. He commented on the bird reported off the Isles of Scilly in July 2001 (Fisher & Flood 2001), stating that it was an 'obvious and unambiguous Fea's'.

Examination of published photographs of birds of known identity does not, however, inspire confidence in the validity of differences in wing shape as a field character. Directly comparable photographs of hand-held outstretched underwings of *deserta* (Jouanin *et al.* 1969, plate 4) and *madeira* (Wingate *et al.* 1998, fig. 11) do not reveal a difference in shape (*contra* Tove 2001), while the shape of an unheld, outstretched upperwing of *deserta* (Jouanin *et al.* 1969, plate 5) is similar to the wing shape of the bird in plate 7 of Gantlett (1995), which is claimed to be *madeira*.

Tove's methods, though not necessarily his

Tony Marr



1. Fea's Petrel *Pterodroma feae deserta*, Desertas, Madeira Islands, August 1990. The heavy bill is apparent. Note how bright sunshine makes the crown and tail appear paler than their true colour tones.

Tony Marr



2. Fea's Petrel *Pterodroma feae deserta*, Desertas, Madeira Islands, August 1990. The bill structure is just visible in this photograph. Note the appearance of a partial dark breast-band.

Tony Marr



3. Fea's Petrel *Pterodroma feae deserta*, Desertas, Madeira Islands, August 1990 (same individual as in plate 2). Note how the grey tail appears only a shade or two paler than the mantle in flat light.

Tony Marr



4. Presumed Fea's Petrel *Pterodroma feae*, Desertas, Madeira Islands, August 1990. Typical heavy-billed and hooded appearance, with paler tail catching the light. Note how the wing-tips appear quite rounded in this photograph.

conclusion that the identity of all the well-documented North Atlantic records is consistent with *feae*, were contested by both Marr (2001) and Harrop (2001). Harrop pointed out that there are differences in the structure of the bills of *feae* and *madeira*. On *feae*, the distance between the tip of the nostril (naricorn) and the back of the hook at the tip of the upper mandible (maxillary unguis) is very short, forming a small 'notch' in the contour of the bill in profile. On *madeira*, this distance is longer and forms the impression of a 'wedge'. This feature had not been noted before, presumably because it does not constitute one of the standard bill measurements (cf. Zino & Zino 1986, Wingate *et al.* 1998). Further research has confirmed that, if visible, this is a reliable feature for the separation of *feae* and *madeira*, but there is no apparent difference in bill structure between nominate *feae* and *deserta*.

To summarise, there are no known consistent plumage differences between *feae* and *madeira*, and the proposed differences in wing structure remain of unproven validity in the field. Size may be helpful in direct comparison, but is unlikely to be much help when identifying lone vagrants away from the breeding grounds. On current knowledge, only bill structure can be regarded as diagnostic, and this will require excellent views at close range. If, at some point in the future, *deserta* were to be split from *feae*, field identification would almost certainly be impossible.

Study of skins of *mollis*, together with photographs of birds of known identity, has shown that a number of consistent differences exist between *mollis* and *feae/madeira* which, given good views, should make field identification possible. The bill of *mollis* tends to be relatively light and more similar in structure to that of *madeira* than *feae*, although a few individuals have heavier bills more like *feae* (fig. 1). More importantly for field identification, on pale morphs of *mollis* the crown is typically paler grey than on *feae/madeira* and therefore contrasts more strongly with the dark facial 'mask' (fig. 2), while the mantle and greater coverts are also paler grey. It must be emphasised, however, that wind and light make a significant difference to the appearance of birds in the field (fig. 3), so these factors need to be taken into account before attempting identification. Pale morphs also have a variable, but typically bold, grey breast-band, though, as noted below, some

feae may appear to show a breast-band in the field. Dark morphs are relatively rare, and difficult to distinguish from some other dark petrels which are outside the scope of this paper.

Extralimital records

Until there is a pattern of records which have been formally accepted at species level, assessment of the distribution of these three species away from the breeding areas will remain highly speculative. In his discussion of the first record of a 'soft-plumaged petrel' off Ireland, in September 1974, Enticott (1999) made a good case for associating the record with the path of a dying hurricane. Since the early 1980s, and in particular since the early 1990s, there has been a phenomenal increase of records in British waters, many of which cannot be related to hurricanes.

The emerging pattern of records, mainly in late spring and summer in the western North Atlantic, and in late summer and early autumn in the eastern North Atlantic, is likely to reflect a combination of factors including observer activity and improved optical instruments. It may also, however, be partly attributable to a real rise in numbers, and it would not be surprising if global warming brings increasing numbers of tropical species into temperate waters. Since all the well-documented records to date are compatible with *feae*, the suggestion that birds from Cape Verde disperse rapidly after breeding (from May onwards) to the western North Atlantic, then follow a clockwise route which brings them back into eastern North Atlantic waters (Enticott 1999), seems the best working hypothesis.

Leaving aside the records from both sides of the North Atlantic discussed above, the only extralimital records to date involving birds unequivocally identified to the species level involve single examples of *feae* trapped on the Azores in June 1990 (Bibby & del Nevo 1991); again on the Azores in September 1993, retrapped in August 1994 (Monteiro & Furness 1995); and a specimen of *feae* found in February 1963 on the western shore of the Dead Sea, Israel (Bourne 1983b; Shirihai 1999 – note that the date was given incorrectly as November 1968 in the latter reference). The identity of the Israeli specimen was confirmed by Killian Mullarney (*in litt.* and from photographs), though he had not examined the actual specimen as implied by Shirihai (1999).

Tony Marr



5. Fea's Petrel *Pterodroma feae deserta*, Desertas, Madeira Islands, August 1990. The typical heavy-billed and hooded appearance is again apparent.

Tony Marr



6. Fea's/Zino's Petrel *Pterodroma feae/madeira*, Desertas, Madeira Islands, August 1990. Although the bird is close, at this angle it is impossible to assess bill structure. On current knowledge, none of the visible characters is sufficient for specific diagnosis.

Tony Marr



7. Soft-plumaged Petrel *Pterodroma mollis mollis*, at sea between Argentina and the Falklands, December 1992. Note the quite pale grey breast-band and the head pattern of this typical bird in the South Atlantic.

Tony Marr



8. Soft-plumaged Petrel *Pterodroma mollis mollis*, at sea between Argentina and the Falklands, December 1992. Even in a poor view, the pale grey crown and mantle, as well as the concolorous tail are visible.

Although Jepson & Zonfrillo (1988) reported two possible *mollis* between Madeira and Deserta Grande in 1986, the claim was regarded as dubious by Zino *et al.* (1995) on the basis that some *feae* have extensive breast-bands (with a gap of as little as about 10 mm) which may appear complete in the field (cf. fig. 3). Zino *et al.* required an unambiguous photographic record or specimen for a record to be acceptable. There is one accepted sight record of *mollis* in the Western Palearctic, at Eilat, Israel, in March 1997 (Shirihai 1999). In the absence of any other confirmed records from anywhere in the northern hemisphere, however, this record is open to question. According to the published description, the bird had a dark crown, an incomplete breast-band, and the dark bill was prominent. Its identification as *mollis* was based on concolorous dark upperparts, rump and uppertail, yet these areas can also appear concolorous on *feae*. The combination of characters shown by this individual is more likely to be shown by *feae* than *mollis*, so its identification as *mollis* appears to be unsafe.

Two specimen records from South Africa were formerly thought to be possible *madeira* on the basis of morphology and biometrics (Clancey *et al.* 1981), but the only living author of this paper, Ian Sinclair, now believes that both are probably southern *mollis* (per Jim Enticott). There has, therefore, not been any confirmed historical record of *madeira* away from the breeding grounds.

Acknowledgments

Tony Mann was instrumental in drawing together all the people involved with this paper. He and Ian Lewington contributed helpful advice and discussion, as well as, respectively, the excellent slides and artwork which accompany this paper. Tim Inskipp, stimulated by his sighting of a *Pterodroma* off Dungeness, Kent, in October 1983, undertook a huge amount of the initial research on which this review is based, and made helpful comments on the first draft. Jo Cooper provided information about the fossil record, while Robert Prŷs-Jones kindly provided access to specimens at the NHM. Killian Mullarney confirmed the identity of the Dead Sea specimen, and Jim Enticott reported current thinking about the specimens from South Africa. Jimmy Steele provided useful discussion in relation to his work on this group for BBRC. Linda Birch, at the Alexander Library in Oxford, answered queries about references patiently and often at short notice.

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Looking back

Fifty years ago:

'An unrecorded occurrence of a probable Red-flanked Bluetail in Lincolnshire.—The extract quoted below is from page 82 of the typescript of an as yet unpublished book by the late G. H. Caton Haigh entitled "Birds of a Lincolnshire Parish being A List of the Birds of North Cotes with Notes on the Autumn Migration".

'Blue-tailed Warbler On September 19th, 20th and 21st, 1903, there occurred one of the greatest mass migrations of small birds that has taken place in the last half century. Redstarts were far the most abundant but Pied Flycatchers, Robins, Willow Wrens, Goldcrests and Wheatears swarmed and a few Blue-throats were present. When beating the hedge running along the land side of the sea bank my keeper (F. Bacon), who was on one side of the hedge, stopped me saying: "On the hedge in front of me is the prettiest bird I have ever seen." Asked to describe it he said "It is like a large Redstart with the red parts blue." All his attempts to make the bird fly to my side of the hedge failed and after making several short flights along the opposite side it flew inland and could not be found again though searched for carefully on three

days. I had several short views of this bird as it passed low in thin parts of the hedge but had no chance of shooting it. The keeper's description seemed to me to be correct. The head and upper back and wings were bluish-grey, the lower back and tail bright blue and there was a white eye stripe and a touch of rust colour on the sides. I did not see its under-parts but the keeper described it as white. I had no doubt as to the identity of this rare visitor but as I was unable to produce the bird I considered that the evidence was not sufficient to add this species to the British list. I did not therefore place the occurrence on record. It is not a likely species to be imported as a cage bird and its range is similar to that of other birds which have straggled to this country.' (*Brit. Birds* 47: 28-30, January 1954)

[In 1954, the *BB* Editors deemed it prudent to regard this bird as a 'probable' Red-flanked Bluetail *Tarsiger cyanurus* given the time which had elapsed since the observation, and also that the description was largely based on the observations of F. Bacon, and not the more experienced Caton Haigh. Nonetheless, the record was subsequently reviewed, and now stands as the first British record of Red-flanked Bluetail. Eds]

Birdwatching from cargo ships

David K. Ballance



9. MV *Palliser Bay* in Fremantle, Western Australia, October 2001. This ship is a standard type for a larger container ship, with cargo carried fore and aft, and no cranes. Note the Australian Pelican *Pelecanus conspicillatus* in the foreground. David K. Ballance

A reader glancing through the volumes of *British Birds* published during the interwar years will soon notice the number of papers and notes based on observations from passenger ships. This was also the era of the first field guide to world seabirds (Alexander 1928), soundly based on experience gained during passages in liners. After 1945, the growth of cheap air travel eventually forced these ships from service, and with them went the opportunities for ornithologists to record seabirds outside the European waters covered by the ferry network. These opportunities still exist for observers in the naval and merchant services, but the numbers of such recorders have shrunk greatly in recent decades. Passengers on cruise ships can contribute records, but

the most popular destinations for such journeys, such as the Mediterranean and the Caribbean, are rather restricted in their variety of seabirds, and cruise organisers tend to avoid subjecting customers to long sea-passages, the emphasis being on the number of ports visited in a short period, although round-the-world voyages still take place. Soper (1989) provided a good survey of what can be seen on well-known cruise routes. Apart from the increasing number of one-day 'pelagic' trips, it is only in the polar regions that new opportunities have opened – at a price – for birdwatchers to visit places of great seabird interest or diversity.

One can, however, still travel the oceans in the old, slow way by taking passage in one of a large selection of cargo vessels. Cargo ships do

not make 'cruises', but 'voyages', the old term for a trading venture. Since 1996, I have made eight such trips. I have never met other birdwatchers who have done so, but I have often been asked about how they can be arranged. So it may be useful to publish some facts and advice for those who might be interested. It is ironic that in an age when identification techniques and enthusiasm abound as never before, the areas of ocean which can normally be explored by anyone with ornithological knowledge have much decreased. For example, on the 11-day passage from Panama to Tahiti in 1999, I saw no long-distance traffic at all; in the ten days from Cape Agulhas (South Africa) to Fremantle (Australia) in 2001, there was only one deep-sea trawler; and on the return voyage from West Africa to Brazil in 2002, I saw only one freighter. Not one vessel in a thousand carries a competent bird observer.

Time is an important limiting factor. Most birdwatchers making such trips will be on holiday or in retirement, whereas in the past some were on passage to or from overseas posts. Operators of short- or medium-length services, for example to the Mediterranean or the Baltic, often keep to a fairly predictable timetable, but even then boarding a freighter is seldom as easy as catching a car ferry. You book for an estimated date of departure, and the agents will

confirm date and time a few days before. Your contract promises that the vessel will leave 'on or about' a date, a deliberate vagueness which can cover several weeks; nor can you even be quite sure that the ship will leave from the port originally forecast. Of course, many services start or finish from outside the UK, and you might incur long and expensive delays abroad, as well as losing the advantage of fixed-flight bookings. Such uncertainties mean that travel by cargo ship is really an option only for those in retirement or with flexible employment. You should clear a wide space in your diary and be especially careful not to settle your return for a particular date. The carriage of passengers is a minor consideration for owners and masters, who are mainly concerned with containers, bulk cargo and vehicles.

A few captains still maintain a tradition for hospitality, but that will not be displayed in much more than a weekly drinks party. No other entertainment is offered. Most officers speak some English, which is very much the language of the seas; indeed, they have to, since almost all the technical information on the bridge comes from British sources. Cargo vessels cannot take more than 12 passengers, since for larger numbers a doctor must be carried. Some have only one or two cabins. The cost varies widely, but is generally between £50



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10. MV Spes in Limassol, Cyprus, September 2001. A nine-deck roll-on roll-off ('ro-ro') vessel, with all accommodation on the highest deck, and a short foredeck.

and £100 per person per day, single cabins being generally 20% or 30% more expensive than doubles. In the past, there have been cheaper services by east European lines, but recently they have been hard to find. The price is inclusive of fairly comfortable en-suite accommodation, passage and copious food; and on some vessels a quite remarkable amount of free drink. You must generally take out a special insurance policy, the cost of which doubles at the age of 65; this is to enable the vessel to divert to a port if you are seriously ill. Many ships now permit the sending and receiving of e-mails, and mobile phones may work near land.

A circumnavigation will probably take at least 80 days; my own took 115. A return voyage to either coast of South America may last six to eight weeks, and an east Mediterranean or West African trip from three to six weeks. A single voyage to Australia or New Zealand takes about a month. You can, of course, return by air or by a later vessel of the same or a different line. As examples, my own voyages have been as follows (details of the birds logged during parts of these trips are given in tables 1 & 2):

- 1996/97: Hamburg–Guayaquil–Callao–Valparaíso and return to Bremen (Polish Ocean Lines, now not available, though other lines are; see Ballance 1997)
- 1999/2000: Westward circumnavigation, Dunkerque–Panama–Tahiti and other South Pacific ports–Auckland–Papua New Guinea ports–Darwin–Singapore–Suez–Hamburg (Bank Line)
- 2000: Antwerp–Piraeus–east Mediterranean and Italian Ports–Portbury (Grimaldi Lines; large car carrier)
- 2001: Tilbury and north European ports–Cape of Good Hope–Fremantle (P&O Nedlloyd; now not available, and a sad loss)
- 2001: Brisbane–New Zealand ports–Panama–Kingston–Philadelphia (Blue Star);
- 2002: Tilbury and north European ports–Dakar–Brazilian and Argentinian ports–Montevideo–Dakar–Tilbury (Grimaldi Lines)
- 2003: Felixstowe and North European ports–Canary Islands–Cádiz–Felixstowe (OPDR, German-owned but Spanish-crewed)
- 2003 Thamesport and north European ports–Montreal–Thamesport (Canmar)

The best variety of seabirds is undoubtedly offered by the southern oceans, especially from September to April. At the beginning and end of this period, sub-Antarctic birds are on the move, and for all of it northern birds are on passage or in winter quarters south of the equator. Voyages south of Valparaíso and Buenos Aires are hard to find, and the withdrawal of the P&O service round South Africa and Cape Horn means that an enormous area must remain unvisited except by Antarctic cruises. Some seas can be disappointing. A January passage from Singapore to the Horn of Africa produced very little indeed, and the Caribbean and Mediterranean are of limited appeal except at migration seasons. The greatest excitement is generally to be found in narrows, whether natural or man-made, since they channel seabirds and provide bridges for land-birds; the Strait of Gibraltar, the Cook and Torres Straits, and the Panama and Suez Canals are obvious examples, but chance will dictate whether you pass them in daylight. Among areas which I have not myself visited by freighter, I suggest that good winter possibilities are in Japanese/Korean seas and in the Gulf of Guinea, where so many northern terns (*Sterna* spp.) are found. There are sailings to the former from the west coast of the USA and from Australia/New Zealand, and to the latter from northern European ports, including Tilbury. Tuck (1980) provided a good overview of the possibilities.

The type of vessel has some bearing on effective observation. The commonest is the now-conventional container ship, in which all accommodation is aft, the containers being carried on and below deck, forward and sometimes also at the stern. The larger ships of this type are upward of 40,000 tons and up to 300 m long; one of my recent voyages was in a much smaller ship of 7,000 tons. In most such vessels there is access in reasonable weather to the quiet and distant foredeck, which is by far the best place to observe most seabirds and to obtain startlingly close views of dolphins. Here you will see birds disturbed from the water and be close to migrants on a course at an angle to your own. Storm-petrels (*Hydrobatidae*), prions *Pachyptila* and terns are nearly always seen better from the bows than from higher up or further astern. Another type of vessel is the vehicle carrier. This may resemble a cross-Channel ferry, with the bridge forward, a very

short foredeck and a vast open upper deck: a football pitch on top of a sharpened shoebox. There are also 'co-ro' (container roll-on roll-off) ships, where containers are carried above (and in) a garage system; it may not be possible to have access to the foredeck of such vessels. A side cabin has great advantages, as it helps you to see birds in rough weather. In the southern oceans, the stern gives a good view of following albatrosses (Diomedidae) and larger petrels (Procellariidae).

A telescope is of limited use, though it may help to take one for viewing harbours, estuaries and very calm waters; the main problem is vibration through the tripod legs, which is slightly reduced at the bows, away from the engines. A GPS is almost essential for keeping accurate records of important sightings. Positions are obtainable from the bridge, to which access is usually granted, but you may be a long way from there at the moment of observation. A simple instrument can now cost less than £150; you need to be sure before leaving home that you can obtain latitude and longitude from it, as the default setting may be the UK map grid.

It is best to keep regular records in something like the format suggested by the Royal

Naval Birdwatching Society, which publishes important material in *Sea Swallow*; the current Secretary is F. S. Ward, 16 Cutlers Lane, Stubbington, Fareham, Hampshire PO14 2JW, and the society welcomes non-Service members. Record sheets should be prepared beforehand. A day's observations can be divided into three or four sections, which are defined by their median positions. It is always important not to miss the two hours after dawn, when (if it is allowed) a tour of the vessel should be made to check for possible crash-landings aboard during the night. There is a standard coding system for behaviour and situation ('flying', 'on water', 'feeding', etc.). You will need to note course, speed and wind strength; water temperatures and depths are often important and can be obtained from the bridge. The position of landbirds seen should be entered. Some will pass by, but others will settle if they can, and may disappear among containers or the complicated machinery of the ramp at the stern. Peregrine Falcons *Falco peregrinus* and boobies (Sulidae) may exploit the ship, the former to attack petrels, phalaropes *Phalaropus* or passerines (and to be frustrated in their attempts to take flying fish), the latter to dive for prey disturbed by the bow wave.



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11. MV *Teignbank* loading at Kimbe, New Britain, Papua New Guinea, December 1999. This vessel is a multi-purpose 'co-ro' (container roll-on roll-off), with its own cranes, garage, hold (for copra), tank (for palm oil) and containers on deck.



12. Masked Booby *Sula dactylatra* seen from the bows of the MV *Teignbank*, near the Galapagos Islands, December 1999.

The great delights of birdwatching at sea lie in numbers and in surprises. The first can be experienced after dawn in the Humboldt Current off Peru as the interminable lines of Peruvian Boobies *Sula variegata*, Guanay Cormorants *Phalacrocorax bougainvillii* and Brown Pelicans *Pelecanus occidentalis thagus* ('Peruvian Pelicans') move across the bows to the offshore anchovy grounds, often so near that you can almost touch them; or in the thousands of Great Shearwaters *Puffinus gravis* passing a Brazil-bound vessel in autumn on their return passage to Tristan da Cunha. The second can be found in the sudden appearance of a landbird, such as a Common Nightingale *Luscinia megarhynchos* on the bridge-wing off Morocco or a party of Stone Curlews *Burhinus oedichenus* circling the ship off Palestine. Then there may be the long-sought-after rarity: Murphy's Petrel *Pterodroma ultima* materialising under the bows south of the Pitcairn Islands in the South Pacific, or Abbott's Booby *Papasula abbotti* perched on a log, almost allowing itself to be run down south of Java. Overlaps between tropical and northern or southern species can be surprising: the last Red-billed Tropicbird *Phaethon aethereus* may occur almost at the same time as the first Royal Albatross *Diomedea epomophora* to the northeast of New Zealand; a

recent afternoon in December southeast of Cape Hatteras began with Black-capped Petrels *Pterodroma hasitata* and ended with a juvenile Black-legged Kittiwake *Rissa tridactyla*; off the Brazilian coast in September, Manx Shearwaters *Puffinus puffinus* mingle with Yellow-nosed Albatrosses *Thalassarche chlororhynchos* and Magellanic Penguins *Spheniscus magellanicus*.

Much patience is needed. In the central Pacific, a whole day's observation may yield only a distant and unidentifiable gadfly petrel *Pterodroma* and a solitary White Tern *Gygis alba*, apparently frail but holding a tireless course across the bows against the southeast trade winds. Hot afternoons are often profitless. Large areas of the deep Atlantic can be empty of all species, even at migration seasons. Many birds may have to be put down as unidentified, even after the most careful study of Peter Harrison's guides (Harrison 1983, 1987); this is especially the case with gadfly petrels, storm-petrels and skuas (Stercorariidae). Views may be brief, since both platform and target are moving, even if you have the advantage of distance.

Tables 1 & 2 are intended to give a rough idea of what might be seen on certain routes and at certain seasons. The totals are based on regular observations for an average of six hours'

watching on every full day at sea. Most of the records have been published in much greater detail in the annual 'Observations of seabirds' in *Sea Swallow*.

One might hope to see a reasonable number of species ashore, but much will depend on chance. The vessel may spend a whole day alongside, but a few hours are more normal for container and 'ro-ro' (roll-on roll-off) vessels, and part of that time may be at night. Bulk cargo, such as copra and fish-meal, takes longer to load. Most modern ports are some way from the cities after which they are named, and public transport can be extraordinarily difficult to find. Some ports have security problems, and a few are positively dangerous, such as Port Moresby and Lae in Papua New Guinea. Agents will occasionally offer excursions on which a few species can be found. In some harbours, a good deal can be seen from the vessel: the South American voyage described in table 1 included a visit to the car terminal at Zarate, upriver from the Plate Estuary, where a fair range of local species could be seen around the ship.

A few lines may still accept direct bookings

from would-be passengers, but most reservations are made through specialist agents. A good idea of available voyages and prices can be obtained from the brochure published annually by Strand Voyages, Strand, London WC2N 4HZ; www.strandtravel.co.uk, while Verlomme (1995, 2000) provides a useful general introduction to the options for birdwatching from cargo ships.

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13. Seabirds will sometimes 'crash-land' on your vessel during the night, so a tour of the decks soon after dawn may prove rewarding. This Wedge-tailed Shearwater *Puffinus pacificus* was photographed on the decks of the MV *Teignbank* in the southwest Pacific, in November 1999.



Table 1. Seabirds observed by the author during passages in the Pacific Ocean and seas around Papua New Guinea, 1996-2001. Note: vernacular and scientific names in tables 1 & 2 follow *The British Birds list of names of Western Palearctic Birds* or Dickinson 2003 (*The Howard and Moore Complete Checklist of the Birds of the World*), while the order of species follows Bourne & Casement (1996).

A: MV *Teignbank* from Panama via Tahiti and Nouméa (New Caledonia) to Auckland (New Zealand), 26th October to 20th November 1999 (22 days at sea and three in port); **B:** MV *Queensland Star* from Brisbane (Australia) to Panama via Wellington and Auckland (New Zealand), excluding passage from Wellington to Auckland and birds in Gulf of Panama, 31st October to 24th November 2001 (19 days at sea); **C:** MV *Teignbank* from Santo (Vanuatu) via ports in Papua New Guinea (Lae, Madang, Rabaul, Kimbe), through the China Passage and the Torres Strait to Darwin (Australia), 2nd-24th December 1999; **D:** MV *Lublin* from Guayaquil Roads (Ecuador) to Callao (Peru), Antofagasta and Valparaíso (both Chile), returning via Huacho and Paita (both Peru) to Guayaquil, 23rd November to 17th December 1996. This included 13 whole or part-days at sea. Totals also include the port of Valparaíso and one daylight passage of the Guayaquil Estuary, but not the six days spent loading fish-meal in Huacho Roads (where there was a huge gull roost and some Black Skimmers *Rynchops niger* were seen), or the harbours of Antofagasta and Paita; in the latter, the dominant gull was Grey-headed Gull *Larus cirrocephalus*, which was not seen at sea.

	A	B	C	D
Humboldt Penguin <i>Spheniscus humboldti</i>				18
Wandering Albatross <i>Diomedea exulans</i>		38		
Royal Albatross <i>Diomedea epomophora</i>	2	1		
Waved Albatross <i>Phoebastria irrorata</i>		2		300
Black-browed Albatross <i>Thalassarche melanophris</i>		17		3
Yellow-nosed Albatross <i>Thalassarche chlororhynchos</i>		1		
Grey-headed Albatross <i>Thalassarche chrysostoma</i>				1
Buller's Albatross <i>Thalassarche bulleri</i>		1		102
mollymawk <i>Thalassarche</i> sp.		3		
Southern Giant Petrel <i>Macronectes giganteus</i>		2		
giant petrel <i>Macronectes</i> sp.	2			
Southern Fulmar <i>Fulmarus glacialis</i>		1		
Cape Petrel <i>Daption capense</i>		20		
prion <i>Pachyptila</i> sp.		1		
Tahiti Petrel <i>Pseudobulweria rostrata</i>	29		32	
Kermadec Petrel <i>Pterodroma neglecta</i>		4		
Herald Petrel <i>Pterodroma arminjoniana</i>	8	3		
Phoenix Petrel <i>Pterodroma alba</i>	1			
Great-winged Petrel <i>Pterodroma macroptera</i>		221		
White-headed Petrel <i>Pterodroma lessonii</i>		9		
Murphy's Petrel <i>Pterodroma ultima</i>		1		
Mottled Petrel <i>Pterodroma inexpectata</i>	2	1		
Black-winged Petrel <i>Pterodroma nigripennis</i>	94			
Dark-rumped Petrel <i>Pterodroma phaeopygia</i>		26		
Juan Fernandez/White-necked Petrel				
<i>Pterodroma externa/cervicalis</i>	41	67		101
Gould's Petrel <i>Pterodroma leucoptera</i>	6	6		
Stejneger's Petrel <i>Pterodroma longirostris</i>	113	6		745
Cook's Petrel <i>Pterodroma cookii</i>	7	9		
Pycroft's Petrel <i>Pterodroma pycrofti</i>		2		
'Cookilaria Petrel' <i>Pterodroma cookii/pycrofti</i>	7	177		
small gadfly petrel <i>Pterodroma</i> sp.	47	13		
Grey Petrel <i>Procellaria cinerea</i>		57		
White-chinned Petrel <i>Procellaria aequinoctialis</i>		19		111
Parkinson's Petrel <i>Procellaria parkinsoni</i>		1		
petrel <i>Procellaria</i> sp.	3	12		
Streaked Shearwater <i>Calonectris leucorhynchos</i>			13,400	
Wedge-tailed Shearwater <i>Puffinus pacificus</i>	662	286	335	
Buller's Shearwater <i>Puffinus bulleri</i>	11	89		
Flesh-footed Shearwater <i>Puffinus carneipes</i>		14	1	
Pink-footed Shearwater <i>Puffinus creatopus</i>	10			33

	A	B	C	D
Sooty Shearwater <i>Puffinus grisens</i>		60	1	3,000
Short-tailed Shearwater <i>Puffinus tenuirostris</i>	242	2,230	27	
Kiritimati Shearwater <i>Puffinus nativitatis</i>		8		10
Fluttering Shearwater <i>Puffinus gavia</i>		30		
Little Shearwater <i>Puffinus assimilis</i>		27		
Audubon's Shearwater <i>Puffinus lherminieri</i>	22			6
Peruvian Diving Petrel <i>Pelecanoides garnotii</i>				3
Wilson's Storm-petrel <i>Oceanites oceanicus</i>		4		930
White-vented Storm-petrel <i>Oceanites gracilis</i>		2		1
White-bellied Storm-petrel <i>Fregetta grallaria</i>	1			8
Black-bellied Storm-petrel <i>Fregetta tropica</i>		2		
Band-rumped Storm-petrel <i>Oceanodroma castro</i>	274	289		
Markham's Storm-petrel <i>Oceanodroma markhami</i>		22		550
Hornby's Storm-petrel <i>Oceanodroma hornbyi</i>				350
storm-petrel sp.		8		12
Red-billed Tropicbird <i>Phaethon aethereus</i>		1		4
Red-tailed Tropicbird <i>Phaethon rubricauda</i>	4	8		
White-tailed Tropicbird <i>Phaethon lepturus</i>	10		3	
tropicbird <i>Phaethon</i> sp.	1	4		
Brown Pelican <i>Pelecanus occidentalis</i>				755
'Peruvian Pelican' <i>Pelecanus occidentalis thagus</i>				1,050
Australasian Gannet <i>Morus serrator</i>	10	10		
Blue-footed Booby <i>Sula nebouxii</i>				734
Peruvian Booby <i>Sula variegata</i>				3,950
Masked Booby <i>Sula dactylatra</i>	5	28	3	4
Brown Booby <i>Sula leucogaster</i>	21		300	
Red-footed Booby <i>Sula sula</i>	336	4	15	
booby <i>Sula</i> sp.	4	1	15	
Neotropical Cormorant <i>Phalacrocorax brasilianus</i>				236
Pied Cormorant <i>Phalacrocorax varius</i>		85		
Little Black Cormorant <i>Phalacrocorax sulcirostris</i>	1		10	
Little Pied Cormorant <i>Phalacrocorax melanoleucos</i>		10	2	
Guanay Cormorant <i>Phalacrocorax bougainvillii</i>				10,300
Red-legged Shag <i>Phalacrocorax gaimardi</i>				5
Spotted Shag <i>Phalacrocorax punctatus</i>		10		
Magnificent Frigatebird <i>Fregata magnificens</i>	15	4		2,100
Great Frigatebird <i>Fregata minor</i>		2	9	
Lesser Frigatebird <i>Fregata ariel</i>			85	
frigatebird <i>Fregata</i> sp.	1		62	
Grey Phalarope <i>Phalaropus fulicarius</i>				4
Red-necked Phalarope <i>Phalaropus lobatus</i>			127	1
phalarope <i>Phalaropus</i> sp.		9		3,150
Brown Skua/Southern Skua <i>Stercorarius antarcticus</i>				1
Chilean Skua <i>Stercorarius chilensis</i>				1
South Polar Skua <i>Stercorarius maccormicki</i>		3	10	1
large skua <i>Stercorarius</i> sp.				5
Pomarine Skua <i>Stercorarius pomarinus</i>	6	22	88	101
Arctic Skua <i>Stercorarius parasiticus</i>		2		20
Long-tailed Skua <i>Stercorarius longicaudus</i>				14
small skua <i>Stercorarius</i> sp.	7	9	39	215
Grey Gull <i>Larus modestus</i>				99
Belcher's Gull <i>Larus belcheri</i>				3
Laughing Gull <i>Larus atricilla</i>	1	4		2,300
Kelp Gull <i>Larus dominicanus</i>	30	20		72
Franklin's Gull <i>Larus pipixcan</i>		1		4,450
Silver Gull <i>Larus novaehollandiae</i>	400	50	2	
Sabine's Gull <i>Larus sabini</i>				150

	A	B	C	D
Swallow-tailed Gull <i>Creagrus furcatus</i>		19		18
Black Tern <i>Chlidonias niger</i>				200
Gull-billed Tern <i>Sterna nilotica</i>				5
Common Tern <i>Sterna hirundo</i>		330	257	
Arctic Tern <i>Sterna paradisaea</i>				202
Roseate Tern <i>Sterna dougallii</i>			30	
White-fronted Tern <i>Sterna striata</i>	20			
Black-naped Tern <i>Sterna sumatrana</i>	20		32	
Bridled Tern <i>Sterna anaethetus</i>	14		72	
Sooty Tern <i>Sterna fuscata</i>	275	80	703	
Little Tern <i>Sterna albifrons</i>			8	
Least Tern <i>Sterna antillarum</i>	1			
Peruvian Tern <i>Sterna lorata</i>				2
Crested Tern <i>Sterna bergii</i>	2	36	38	
Royal Tern <i>Sterna maxima</i>	1			
Elegant Tern <i>Sterna elegans</i>				32
Royal/Elegant Tern <i>Sterna maximal elegans</i>				22
Lesser Crested Tern <i>Sterna bengalensis</i>			3	
Sandwich Tern <i>Sterna sandvicensis</i>				192
Inca Tern <i>Larosterna inca</i>				121
Brown Noddy <i>Anous stolidus</i>	42	2	74	
Black Noddy <i>Anous minutus</i>	300	16		
noddy <i>Anous</i> sp.	130			
Grey Noddy <i>Procelsterna albivitta</i>	5			
White Tern <i>Gygis alba</i>	650	13	78	
tern <i>Sterna/Anous</i> sp.	208		1,100	



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14. Landbirds occasionally use the ship as a resting place or convenient perch. This photo shows three Peregrine Falcons *Falco peregrinus* on the foremast of MV *Teignbank*, Gulf of Panama, in December 1999.

Table 2. Seabirds observed by the author during passages in the Atlantic and Indian Oceans, 2001-2002.

E: MV *Palliser Bay* from the Canary Islands to Cape Agulhas (South Africa), 25th September to 4th October 2001 (ten days at sea); **F:** MV *Palliser Bay* from Port Elizabeth (South Africa) to Fremantle (Western Australia), 5th to 14th October 2001 (ten days at sea); **G:** MV *Repubblica di Roma* from the Canary Islands to Dakar (Senegal), Banjul (Gambia), Salvador, Vitória, Rio de Janeiro, Santos and Paranaguá (Brazil) and Buenos Aires (Argentina), and returning from the River Plate at Montevideo (Uruguay) to Paranaguá, 8th September to 1st October 2002 (about 15 whole days at sea, apart from night passages between ports; seven days in port); includes birds seen in harbours; **H:** MV *Canmar Venture* from Thamesport (England), Antwerp (Belgium) and Le Havre (France) to Montreal (Canada), returning to Thamesport, 18th August to 7th September 2003 (13 days at sea or in the outer St Lawrence).

	E	F	G	H
Great Northern Diver <i>Gavia immer</i>				3
Rockhopper Penguin <i>Endiptes chrysocome</i>		2		
Jackass Penguin <i>Spheniscus demersus</i>		2		
Magellanic Penguin <i>Spheniscus magellanicus</i>			125	
White-tufted Grebe <i>Rollandia rolland</i>			20	
Wandering Albatross <i>Diomedea exulans</i>		89		
Black-browed Albatross <i>Thalassarche melanophris</i>	14	30	77	
Shy Albatross <i>Thalassarche cauta</i>	2	2		
Yellow-nosed Albatross <i>Thalassarche chlororhynchus</i>	2	63	2,540	
Grey-headed Albatross <i>Thalassarche chrysostoma</i>		5		
mollymawk (<i>Thalassarche</i>) sp.	22	20	870	
Sooty Albatross <i>Phoebastria fusca</i>		3		
Northern Giant Petrel <i>Macronectes halli</i>		4	4	
Southern Giant Petrel <i>Macronectes giganteus</i>		1		
giant petrel <i>Macronectes</i> sp.		77		
Northern Fulmar <i>Fulmarus glacialis</i>				3,490
Southern Fulmar <i>Fulmarus glacialis</i>		1	1	
Cape Petrel <i>Daption capense</i>		182	13	
Slender-billed Prion <i>Pachyptila belcheri</i>		481		
Fairy Prion <i>Pachyptila turtur</i>		17		
prion <i>Pachyptila</i> sp.		80		
Blue Petrel <i>Halobaena caerulea</i>		2		
Atlantic Petrel <i>Pterodroma incerta</i>			1	
Great-winged Petrel <i>Pterodroma macroptera</i>	134	91	3	
White-headed Petrel <i>Pterodroma lessonii</i>		21		
Soft-plumaged Petrel <i>Pterodroma mollis</i>	3	366		
Bulwer's Petrel <i>Bulweria bulwerii</i>	1			
Grey Petrel <i>Procellaria cinerea</i>		31		
White-chinned Petrel <i>Procellaria aequinoctialis</i>	71	763	1,300	
Cory's Shearwater <i>Calonectris diomedea</i>	7		71	66
Flesh-footed Shearwater <i>Puffinus carneipes</i>		344		
Great Shearwater <i>Puffinus gravis</i>			3,600	2,528
Sooty Shearwater <i>Puffinus griseus</i>	25		37	20
Manx Shearwater <i>Puffinus puffinus</i>	4		1,450	45
Common Diving Petrel <i>Pelecanoides urinatrix</i>		1	8	
Wilson's Storm-petrel <i>Oceanites oceanicus</i>	219			2
White-faced Storm-petrel <i>Pelagodroma marina</i>			2	
White-bellied Storm-petrel <i>Fregetta grallaria</i>	2		3	
Black-bellied Storm-petrel <i>Fregetta tropica</i>		129		
Madeiran Storm-petrel <i>Oceanodroma castro</i>	1		42	
Leach's Storm-petrel <i>Oceanodroma leucorhoa</i>				164
White-tailed Tropicbird <i>Phaethon lepturus</i>	1			
White Pelican <i>Pelecanus onocrotalus</i>			720	
Northern Gannet <i>Morus bassanus</i>	24			830
Cape Gannet <i>Morus capensis</i>	970			
Australasian Gannet <i>Morus serrator</i>		5		

	E	F	G	H
Masked Booby <i>Sula dactylatra</i>			38	
Brown Booby <i>Sula leucogaster</i>			730	
Red-footed Booby <i>Sula sula</i>			2	
Great Cormorant <i>Phalacrocorax carbo</i>			260	
Neotropical Cormorant <i>Phalacrocorax brasilianus</i>			860	
Pied Cormorant <i>Phalacrocorax varius</i>		75		
Little Black Cormorant <i>Phalacrocorax sulcirostris</i>		1		
Little Pied Cormorant <i>Phalacrocorax melanoleucos</i>		75		
Cape Cormorant <i>Phalacrocorax capensis</i>		14		
Magnificent Frigatebird <i>Fregata magnificens</i>			800	
Common Scoter <i>Melanitta nigra</i>				2
Grey Phalarope <i>Phalaropus fulicarius</i>	68		17	82
Red-necked Phalarope <i>Phalaropus lobatus</i>	1			5
Great Skua <i>Stercorarius skua</i>	14		1	23
Brown Skua/Southern Skua <i>Stercorarius antarcticus</i>	1	5	9	
South Polar Skua <i>Stercorarius maccormicki</i>			2	
large skua <i>Stercorarius</i> sp.			6	
Pomarine Skua <i>Stercorarius pomarinus</i>	15			34
Arctic Skua <i>Stercorarius parasiticus</i>	34		11	31
Long-tailed Skua <i>Stercorarius longicaudus</i>			1	2
small skua <i>Stercorarius</i> sp.	4			3
Ring-billed Gull <i>Larus delawarensis</i>				1
Lesser Black-backed Gull <i>Larus fuscus</i>			3	184
Herring Gull <i>Larus argentatus</i>				268
Lesser Black-backed/Herring Gull <i>Larus fuscus/argentatus</i>				180
'Kumlien's Gull' <i>Larus glaucooides kumlieni</i>				1
Great Black-backed Gull <i>Larus marinus</i>				165
Kelp Gull <i>Larus dominicanus</i>	7		1,550	
Grey-headed Gull <i>Larus cirrocephalus</i>			228	
Silver Gull <i>Larus novaehollandiae</i>		500		
Black-headed Gull <i>Larus ridibundus</i>			1	
Brown-hooded Gull <i>Larus maculipennis</i>			14	
Sabine's Gull <i>Larus sabini</i>	13			
Black-legged Kittiwake <i>Rissa tridactyla</i>				2,370
White-winged Black Tern <i>Chlidonias leucopterus</i>	2			
Black Tern <i>Chlidonias niger</i>		36	89	
Gull-billed Tern <i>Sterna nilotica</i>	1		33	
Caspian Tern <i>Sterna caspia</i>		1	16	
South American Tern <i>Sterna hirundinacea</i>			250	
Common Tern <i>Sterna hirundo</i>	5		28	
Arctic Tern <i>Sterna paradisaea</i>		6	645	181
Antarctic Tern <i>Sterna vittata</i>		2		
Common/Arctic/Antarctic Tern <i>Sterna hirundo/paradisaea/vittata</i>	315	17	330	11
Bridled Tern <i>Sterna anaethetus</i>	70		2	
Sooty Tern <i>Sterna fuscata</i>	12		20	
Little Tern <i>Sterna albifrons</i>	1		2	
Crested Tern <i>Sterna bergii</i>	11	13		
Royal Tern <i>Sterna maxima</i>	1		350	
Sandwich Tern <i>Sterna sandvicensis</i>	48		6	3
'Cayenne Tern' <i>Sterna sandvicensis eurygnatha</i>			132	
Black Skimmer <i>Rynchops niger</i>			16	
Razorbill <i>Alca torda</i>				4
Brünnich's Guillemot <i>Uria lomvia</i>				60
Common Guillemot <i>Uria aalge</i>				2
Black Guillemot <i>Cephus grylle</i>				3
Atlantic Puffin <i>Fratercula arctica</i>				32

Short-toed Eagle: new to Britain

Tim R. Cleeves, Maurice Hepple
and Ken D. Shaw

ABSTRACT A Short-toed Eagle *Circaetus gallicus* was present on the Isles of Scilly between 7th and 11th October 1999. This constitutes the first record for Britain, and the possible origins of the bird are discussed.

Every time you arrive on the Isles of Scilly in October, you hope your fortnight will be part of a classic autumn. Looking back over the past three or four decades, certain rarity-packed years stand out. The autumns of 1975, 1983, 1985 and 1987 were all not to be missed, and that of 1999 certainly bears comparison with these. For aficionados of St Agnes in particular, things had started well, with a fine first-winter male Siberian Thrush *Zoothera sibirica* found on 5th October on the Gugh (a small island linked to St Agnes by a sandbar) by the Bradshaw family (minus Colin). Next day, Ren Hathway saw one of his superb illustrations come to life, when he chanced upon a White's Thrush *Z. dauma* at Troytown. Continuing the

eastern theme, while the rest of us were glued to the spot waiting for a glimpse of the White's Thrush, KDS found a Radde's Warbler *Phylloscopus schwarzi*. Many people wait a lifetime to see a vagrant *Zoothera* in Britain; two in two days was simply breathtaking. As a result, it was not surprising that most thoughts were of birds from the east, and what might appear next. Would it be a Yellow-browed Bunting *Emberiza chrysophrys*? Could another Bimaculated Lark *Melanocorypha bimaculata* make an appearance?

On 7th October, TRC, MH, KDS, Ann Cleeves and Sarah Money were chatting near the lighthouse on St Agnes just before 13.00 hrs. Turning to look back towards the Coastguards, TRC noticed a large raptor flying towards us



15. Juvenile Short-toed Eagle *Circaetus gallicus*, Scilly, October 1999.

Rob Wilson

from the southwest. The bird had pale underparts and he instinctively yelled 'Osprey!'. KDS and MH locked onto the raptor, and took a couple of seconds longer to take in the bird's appearance. At that point, we all suffered momentary deafness as KDS screamed, like a banshee, 'Short-toed Eagle!' *Circaetus gallicus*. The sound could probably have been heard on St Mary's! As the bird flew overhead, we were able to focus on its brown head; buff breast-band; pale lower breast and flanks spotted and marked with warm brown; barred tail; and pale, grey-brown upperwing-coverts, contrasting with very dark primaries, primary coverts, greater coverts and secondaries.

After clearing St Agnes's airspace, the bird flew across to St Mary's, travelled on to St Martin's and White Island and then settled down on the Eastern Isles, where it favoured Great Ganilly. On 11th October, in clearing skies, the eagle left the Eastern Isles, circled up to a height of around 350 m over Tresco, crossed to the skies above St Mary's and headed off towards the south or southeast.

Description

During that initial sighting, our total observation time was less than 60 seconds, the bird coming as close as c. 80 m. From these views, the three of us compiled the following description:

The bird looked large, although there were no other birds around for comparison. It looked much longer- and thicker-winged than a

Common Buzzard *Buteo buteo*; it also seemed a stronger, more powerful bird than Common Buzzard. The flight was powerful but relaxed, consisting of two or three flaps then a glide with the wings held flat and the wing-tips depressed, giving it an appearance somewhat recalling a giant Honey-buzzard *Pernis apivorus*. The head looked broad and thickset, and was beige in colour, as were the chin and throat. There was a brighter breast-band, composed of an orange-buff background with darker, smudgy spots. Below this, the breast and belly were white, with obvious orange/brown spots and smudges. The underwing-coverts were white, with rows of brown/grey spots and blotches, and the carpal joints were pale. From below, the secondaries had grey tips and paler bases, while the primaries were darker than the 'wing-linings', and six 'fingered' primaries were visible at the wing-tip. The upperparts showed much contrast between the pale grey/brown upperwing-coverts and the darker, blackish-brown primaries and secondaries. The wings showed no missing flight feathers or any obvious signs of feather wear or damage. The mantle was brown, darker than the upperwing-coverts. The tail was broad when spread, pale beige in colour and with four evenly spaced, darker brown bars across its width.

Age

Later, after examining photographs and video footage of the bird, we were able to age it as a juvenile, based on the following points: the uniformly beige head; pale upperwing-coverts; the



16. Juvenile Short-toed Eagle *Circaetus gallicus*, Scilly, October 1999.

presence of pale tips to the greater upperwing-coverts, forming a thin pale band along the middle of the upperwing; the fact that it was not in moult, with no worn or missing flight feathers; and the warm, orange-buff breast-band and scattered orange/brown spotting on the underparts.

Population distribution and status

Short-toed Eagles breed from Morocco, Spain and France in the west, across southern and eastern Europe and into Russia and the Ukraine, eastwards towards Lake Baikal in Siberia. The Western Palearctic breeding population is estimated to be between 8,000 and 14,000 pairs (Snow & Perrins 1998). Following a long-term decline in numbers, the species is now thought to be stable in most countries, but is still decreasing in at least six European countries, owing to agricultural intensification and other land-use changes or direct persecution. Only by implementing large-scale habitat management – including maintenance of low-intensity farming practices, which can restore habitat for some populations – will the species begin to recover. Better conservation management of woodlands, fire prevention, the limitation of road construction, and education programmes targeted at hunters are all needed. Preserving and enhancing the Cork Oak *Quercus suber* woodlands of the Iberian Peninsula would be a valuable contribution to the conservation of eagle nest-sites – wine drinkers/importers please note. Migrant Short-toed Eagles are still

shot and nests destroyed in some areas, despite legal protection in almost all European countries (Tucker & Heath 1994).

Migration

Short-toed Eagles are almost entirely migratory. Western populations winter in the northern tropics of Africa, in acacia and more humid savannah south of the Sahel, from Sénégalambia and northern parts of Ghana, Togo and Nigeria eastwards through Chad to Sudan and Ethiopia (Snow & Perrins 1998). Each autumn, south-bound birds move through three major migration bottlenecks: the Caucasus, the Bosphorus and Gibraltar. For example, Finlayson (1992) refers to counts of 8,700 in autumn 1972 and 3,200 in autumn 1977 crossing the Strait of Gibraltar. Farther east, larger numbers of migrants are recorded, with autumn passage over Suez reaching 12,000 birds (Bijlsma 1987).

Recent European records to the north and west of the breeding range

We contacted the *British Birds* European Correspondents in France (Philippe J. Dubois), The Netherlands (Arnoud B. van den Berg) and Germany (Jochen Dierschke) and asked each of them whether, in their country, there was any evidence for:

1. An increase in the breeding range of Short-toed Eagle;
2. An increase in the number of passage birds outside the breeding season; and/or



17. Juvenile Short-toed Eagle *Circaetus gallicus*, Scilly, October 1999.

Phil Palmer

3. An increase in birds summering outside the current known breeding range.

Their responses were interesting:

France

In northern France, there has been no detectable increase in sightings of Short-toed Eagles, although there are regular records from Nord/Pas-de-Calais to Brittany (where there is a regular summer staging area in Monts d'Arrée). Within its breeding range in France, the species seems to be maintaining its range and numbers and it is increasing in some parts, e.g. Vaucluse, Haute-Loire. Furthermore, there *has* been an increase in wintering records from southern France.

The Netherlands

There has been an obvious increase in records of Short-toed Eagles in recent years in The Netherlands, including two instances of pairs summering. Pairs at Hoge Veluwe in 1996 and 1997, and Fochtelooverveen in 2001 stayed so long, and in apparently suitable localities (with plenty of reptiles), that there were queries about possible nesting, but so far no nests have been found. Arnoud van den Berg kindly provided a list of the 12 Dutch records between 1907 and 2001, involving 14 individuals; all but three of these after 1980. In addition, one was seen at Fochtelooverveen in August 2002, perhaps a returning individual of the pair seen there in 2001. Even given the rising number of observers, the increase in The Netherlands in the past two decades is clearly genuine.

Germany

As in The Netherlands, it is important to bear in mind the growing number of observers in recent decades; even so, numbers seen in Germany are clearly on the increase too. In the 1980s, Short-toed Eagles were less than annual in appearance, but, on average, 3-4 per year were seen during 1991-98. The majority of records are from southern Germany: Bayern (11 records during 1991-98) and Baden-Württemberg (four). From 1996 to 2002, a pair summered in the Osterholz/Niedersachsen area, and the species may breed there. In the east of the country, five records in the Mecklenburg-Vorpommern area may refer to birds wandering over from the small Polish breeding population.

In addition, in Sweden, there had been over 60

records of vagrant Short-toed Eagles up to 1999 (*Brit. Birds* 93: 526).

Possible origins of the Scilly Short-toed Eagle

It appears that those Short-toed Eagles breeding closest to Scilly may not be increasing as breeding birds, but there is a regular summer staging area in Brittany, which may have been the source of the British record. If not, the bird might have wandered west from The Netherlands or Germany, or it may have come from farther east. With Siberian and White's Thrushes, the first of nine Radde's Warblers to appear in 11 days on Scilly, a 'Siberian Stonechat' *Saxicola torquatus maura* on St Agnes on 7th-12th October and a Blue Rock Thrush *Monticola solitarius* appearing on St Mary's on 14th October, the 'supporting cast' for the eagle certainly had a markedly eastern feel to it rather than being one of displaced birds from southern Europe, such as Hoopoes *Upupa epops*, Alpine Swifts *Apus melba* and Red-rumped Swallows *Hirundo daurica*.

The discovery of the Blue Rock Thrush is also of interest when trying to look at the possible origins of the Short-toed Eagle. The Blue Rock Thrush could not be ascribed to any particular race, but the bird occurred during an arrival of eastern rarities on the island. The first accepted British record of Blue Rock Thrush – a first-summer male at Skerryvore Lighthouse, Strathclyde, on 4th-7th June 1985 – was found dead on 8th June (Hume 1995). This bird also could not be ascribed to a particular race with certainty, but the biometrics (wing length and bill length) of the specimen 'appeared closest to those of birds from the Middle East, and was unlikely to have come from western Europe'.

There are no hard facts which allow us to attribute the source of the Short-toed Eagle to the eastern part of the species' range rather than the closer, more obvious origins of southern France or Spain, and, indeed, the weather data (see below) appear to suggest that an origin in western France is most likely. Nonetheless, the assemblage of eastern vagrants (i.e. east of the Mediterranean basin) on Scilly during the first two weeks of October 1999, together with the paucity of migrants from an obvious southwest European origin, does give us food for thought.

Weather conditions

Norman Elkins has kindly provided the following synopsis of the weather situation pre-

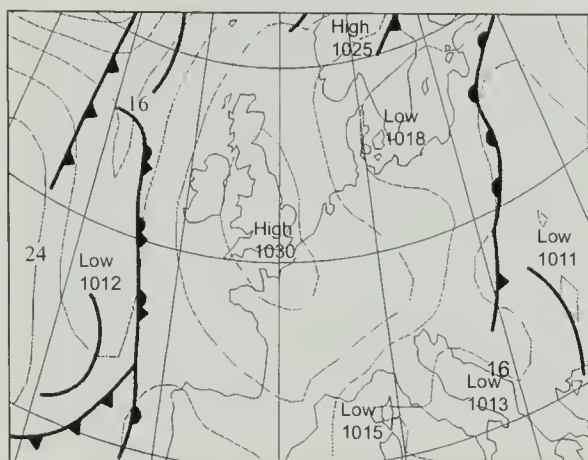


Fig. 1. Synoptic situation over western Europe at 00.00 hrs on Wednesday 6th October 1999. Chart redrawn by Dave Wheeler based on information supplied by the Meteorological Office.

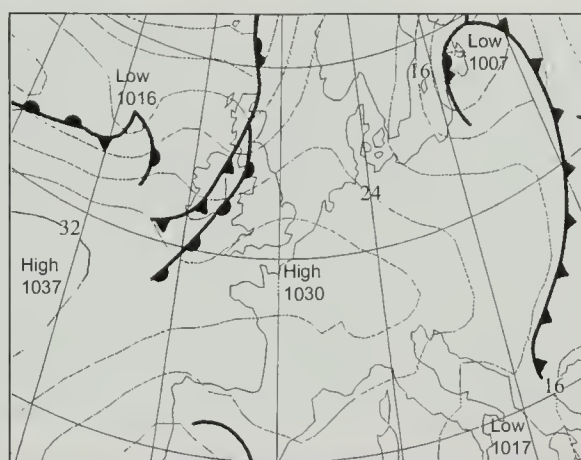


Fig. 2. Synoptic situation over western Europe at 00.00 hrs on Thursday 7th October 1999. Chart redrawn by Dave Wheeler based on information supplied by the Meteorological Office.

ceding the Short-toed Eagle's arrival on Scilly.

An anticyclone moved steadily southeast between 4th and 6th October 1999 to lie over southern England on 6th. Over the western English Channel, the fresh northwest airflow on 4th steadily abated to become a light southeasterly by midday on 5th, to the west of the anticyclone. The weather was cool but sunny, with Guernsey experiencing 10.7 hours of sunshine on 6th. The anticyclone had drifted slowly south into northern France by the night of 6th-7th, maintaining the light southeasterly drift over the western Channel. Winds then veered northwest behind an eastward-moving occluding frontal system which cleared Scilly by midday on 7th. Winds then remained fresh WNW, weakening on 10th and becoming light on 11th as another anticyclone moved east towards southern England, bringing more cool, sunny weather.

Assuming that the bird arrived from the southeast, and with the limited data at my disposal, I would suggest that the nature of the air mass over the region on 6th October would have allowed some shallow convection over the sea, perhaps assisting the eagle on its crossing; it would also have been helped by the fine weather and light southeasterly wind. This is not, however, well supported by satellite pictures, which show more or less clear skies over the western Channel in the afternoon and evening of 6th, although convection is evident over northern France in the afternoon. A more

detailed appraisal cannot be established without a deeper analysis. The bird's departure appeared to have been linked to the next anticyclone and its light winds, with clear skies over the Channel on the afternoon of 11th behind a cold front.

The nature of the synoptic situation during the period does not support the arrival of birds from further east (including the Asian rarities), illustrating the difficulty in associating arrivals of single birds with the weather. I suggest that the eagle originated in western France, but why the bird flew on this unusual reversed heading so late in the season is unclear.

Acknowledgments

We would like to thank everyone who helped us research this article, particularly Norman Elkins and Dave Wheeler who interpreted the weather data, and Arnoud B. van den Berg, Jochen Dierschke and Philippe J. Dubois who provided information on the status of Short-toed Eagle in Europe. Special thanks also to Ann Cleaves, Steve Holliday, Sarah Money and Kathy Shaw, and our friends on St Agnes too numerous to mention.

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EDITORIAL COMMENT Colin Bradshaw, Chairman of the British Birds Rarities Committee commented: 'There can have been few "firsts" for Britain that were as quick to assess from a BBRC perspective. Given the level of detail in the descriptions, together with the quality of the photographs, the decision was simple; indeed, the bird hung around long enough for several of the Committee to get it on their list! There are no obvious confusion species, although if you got the size and shape wrong initially, it might have been confused with some of the North American *Buteos*. Prolonged examination, however, as was possible with the Scilly bird, would easily rule out such a transatlantic vagrant.'

Eric Meek, Chairman of the British Ornithologists' Union Records Committee, commented: 'The acceptance of the Scilly Short-toed Eagle onto the British List proved to be a relatively straightforward affair. There was never any doubt about the identification, given the wealth of birding (and photographic) talent on the islands at the time, although the bravery and confidence of making that "first call" should never be underestimated!

'As with the recent record of Booted Eagle *Hieraetus pennatus*, however, the issue of accepting the Scilly bird as the first for Britain revolved around its provenance. This individual could be aged as a juvenile on a variety of plumage characteristics and thus belonged to the age class most prone to vagrancy. The short duration of its stay was also characteristic of a bird temporarily lost during the course of its migration but eventually re-orientating in improving weather a few days later.

'So far so good; but what of the possibilities of escape from captivity? Investigations revealed just 27 Short-toed Eagles in zoo collections across Europe in 1997, with none in zoos or private collections in Britain. No young birds had been bred in any of these collections in the five years prior to 1997. Although not necessarily comprehensive, these data do indicate the scarcity of this species in captivity. In addition, the Scilly bird appeared to be in pristine plumage condition and showed no abnormal feather wear which might have been indicative of recent incarceration. Furthermore, the increasing number of records in recent years from The Netherlands and from Germany, detailed above, suggest that it was just a matter of time before one strayed across the English Channel.

'Bringing all these factors together, the BOURC members were left in no doubt that everything pointed to this being a wild bird, and Short-toed Eagle was accepted onto Category A of the British List with a unanimous decision on the first circulation of the file.'

Announcement

Bird Photograph of the Year 2004

Established in 1976, this competition seeks to recognise the best and/or the most scientifically interesting bird photograph. Preference is given to photographs taken in the Western Palearctic (Europe, North Africa and the Middle East), but those of species on the Western Palearctic List taken anywhere in the world are also eligible. Normally, up to three colour transparencies, each taken during the previous year (in this case 2003), may be submitted by each photographer.

This year, we will accept either transparencies or digital images but, as the January issue goes to press, we are still finalising the rules for those submitting in digital format. We will print a full announcement, both in *BB* and on our website, as soon as possible. The closing date for entries will be **30th April 2004** and, as in previous years, the winning entries will be exhibited at the British Birdwatching Fair in August, where the awards will be presented.

Wetland birds in the recent fossil record of Britain and northwest Europe

John R. Stewart



18. Dalmatian Pelican *Pelecanus crispus*, Deep Bay, Mai Po, Hong Kong, February 1995. Geological evidence suggests that Dalmatian Pelicans bred in Britain, and in other western European countries (including The Netherlands and Denmark), prior to and during the Iron Age. *Ray Tipper*.

ABSTRACT Wetland habitats in Britain and other parts of western Europe have been severely depleted during the latter part of the Holocene owing principally to drainage and land reclamation. Changes in the distribution of a number of wetland bird species can be gauged from archaeological and geological site records of larger birds, whose remains are generally better preserved. Key species are discussed here, including a heron *Nycticorax fenensis* and a crane *Grus primigenia*, two extinct species named on possibly uncertain fossil evidence.

We can let our minds wander back to the misty realms of fifteen hundred years ago, to a wonderful Britain which was alive with bird song from coast to coast, which sheltered wolves, bears and boars in its dark woodlands, cranes in its marshes, bustards on its heaths and beavers by its streams, and we can visualize the great pink pelican sweeping on its huge pinions over the reedy waterways which then penetrated by secret paths into the very heart of what is now Somerset. (Whitlock, 1953)

Of all the major habitats in northwest Europe, wetlands may have been the most severely depleted during the latter part of the Holocene (approximately the last 10,000 years). This is certainly true of Britain (Whitlock 1953), where the effects of drainage and land reclamation have resulted in a massive loss of wetlands, and those which now remain are but a fraction of the area formerly covered by marshes, lakes, and even rivers. The consequences to breeding populations of wetland birds can be gauged by looking at those species which have vanished (although in the case of some only temporarily) from Britain, and elsewhere in northwest Europe, during the last 2,000-3,000 years. Examples include Dalmatian Pelican *Pelecanus crispus*, Night Heron *Nycticorax nycticorax*, Great White Egret *Ardea alba*, Eurasian Spoonbill *Platalea leucorodia*, Common Crane *Grus grus*, White-tailed Eagle *Haliaeetus albicilla*, Osprey *Pandion haliaetus*, Black Tern *Chlidonias niger*, and possibly also Pygmy Cormorant *Phalacrocorax pygmeus* and Greater Flamingo *Phoenicopterus roseus*. Another possible consequence of wetland loss may be that certain

species, including Mute Swan *Cygnus olor* and Common Crane, may have become physically smaller owing to habitat impoverishment.

Rising sea levels during the later Pleistocene and earlier Holocene also resulted in the loss of wetlands, especially intertidal wetlands. These losses will have affected both breeding and wintering populations of many species, waders and waterfowl in particular, and, in tandem with the ameliorating climate, must have dramatically altered the distribution of many migratory species in northwest Europe (Stewart 2001).

Details from a variety of sites in northwest Europe which have yielded remains of wetland birds have been published (e.g. Bulleid & Gray 1911-17; Soergel 1955; Bramwell 1975; Clason & Prummel 1979; Northcote 1979, 1980; Harrison 1980, 1987; Bochenski 1983; Reichstein & Pieper 1986; Prummel 1987, 1993; Zeiler 1991; Zeiler & Clason 1993; Stewart 1999; Lawerier 2001). These include both geological sites and those which are purely archaeological, where bird bones presumably represent the remains of food refuse (e.g. Bramwell 1975). Geological sites, including the various fen deposits of East Anglia and Danish peat deposits, provide the

best-preserved remains of wetland birds, often yielding complete, or near-complete, skeletons (Northcote 1979; Stewart 1999).

Taxonomic review

Many of Europe's largest birds either inhabit wetlands or are closely associated with them. These include members of the Anseriformes, Ciconiiformes and Gruiformes, representing swans, geese, ducks, herons and egrets, storks and cranes. Any loss of wetland habitats will, therefore, have a disproportionate effect on the large-bird populations of an area, and this loss will be reflected within the fossil record, where



19. Great Cormorant *Phalacrocorax carbo*, Quinta da Lago, Algarve, Portugal, February 1998. In Britain, we tend to think of the occurrence of Great Cormorants in freshwater habitats as being a modern phenomenon, but there is evidence to suggest that this species bred inland (at Glastonbury, Somerset) during the Bronze Age.

remains of the larger species tend to be those which are best preserved. The consequences of wetland loss will have also been significant for smaller birds. As their remains are small, however, the difficulties involved in the recovery of their skeletal remains are considerable, and require the sieving of suitable sediments. Inevitably, therefore, many smaller species are less well represented and their history in wetlands cannot be addressed adequately. Furthermore, the identification of many passerine bones to the species level is problematic, so their physical record, even if it were complete, would be ambiguous and difficult to interpret. Specific identification is the most crucial part of any study of bird bones and considerable difficulties exist; these were discussed by Stewart (1999, 2002a), who concluded that any uncritical review of the literature may lead to questionable conclusions. Many taxonomic groups are problematic in this respect, with ducks and the smaller passerines being possibly the most difficult to identify. The osteology of ducks is conservative, and while a profusion of identifications exist in the literature, it is questionable whether these are entirely accurate and reliable. Consequently, ducks have been omitted from this review.

Changes to wetland bird distributions have not been synchronous, suggesting that a range of factors may be responsible. For example, some species have subsequently re-established breeding populations in northwest Europe, despite there being no significant recovery of wetland environments. Little Egret *Egretta garzetta* has recently become firmly re-established as a regular breeding species in Britain (Bourne 2003), while Common Crane and Eurasian Spoonbill appear to be attempting to do so. Some have attributed these new breeding records to global warming (e.g. Unwin 2000).

There are few taxa which are relatively common in the archaeological record and which have subsequently shown little change in their distribution, one obvious example being Grey Heron *Ardea cinerea*. In contrast, there are many species which are inexplicably absent, or nearly so, from the archaeological record, even though their remains might be expected to occur frequently. These include all of the grebes Podicipedidae, Little Bittern *Ixobrychus minutus*, Osprey, Moorhen *Gallinula chloropus*, Common Coot *Fulica atra* and Water Rail *Rallus aquaticus*. Other species, including Eurasian Bittern *Botaurus stellaris*, White Stork



John R. Stewart

Fig. 1. Dalmatian Pelican *Pelicanus crispus*, at London Zoo.

Ciconia ciconia, Eurasian Spoonbill, White-tailed Eagle, Marsh Harrier *Circus aeruginosus*, Common Crane and Black Tern, are well represented in the archaeological record, but their present European distributions suggest that numbers have diminished dramatically, with many having become locally extinct across large areas of Europe. Interestingly, Great Cormorants *Phalacrocorax carbo* disappeared from freshwater habitats in Britain but remained in coastal regions. Other species which are rare in the archaeological and fossil records and have disappeared from most or all of northwest Europe include Dalmatian Pelican, Pygmy Cormorant, Great White Egret and Greater Flamingo. There are also those species, including Black Stork *Ciconia nigra* and Squacco Heron *Ardeola ralloides*, whose current breeding distribution extends close to northwest Europe and which may have once bred there, but have not, as yet, been found on archaeological or palaeontological sites. Finally, we have a heron *Nycticorax fenensis* and a crane *Grus primigenia*, both extinct species named on questionable fossil grounds.

This paper discusses some pertinent examples of species whose distribution has changed.



20. Greater Flamingos *Phoenicopterus roseus*, Tavira, Algarve, Portugal, November 1996. The sole archaeological record of Greater Flamingo in northwest Europe, in The Netherlands, dates from a period when the climate was warmer than it is today, and from a site which had a nearby saline lagoon.

Dalmatian Pelican

The identity of the pelicans which bred in Britain was uncertain for some time, although some commentators, including Whitlock (1953), erroneously believed them to have been White Pelicans *Pelecanus onocrotalus*. Not surprisingly, historical sources were inadequate in naming the species involved; the 'pelican' recorded in Norfolk by Sir Thomas Browne in 1663 may have been either an escapee from London or a vagrant from southeastern Europe (Whitlock 1953). It has subsequently been established that the pelicans were, in fact, Dalmatian Pelicans, which then bred in northwest Europe, including Britain (Joysey 1963; Northcote 1979). Dalmatian Pelicans are better suited to the cooler climate of northwest Europe and the shallow water bodies of areas such as the East Anglian Fens than are White Pelicans (Northcote 1979). Physical evidence for the presence of pelicans in Britain was perhaps most famously noted from an archaeological perspective by Joysey (1963) in a paper entitled 'A scrap of bone', which described a small bone fragment of Dalmatian Pelican from the Fens. Sites where the species has been recorded include the fen peat deposits; Glastonbury Lake village, Somerset; and the King George Dock in Hull, East Yorkshire (Bulleid & Gray 1911-17; Northcote 1979). The finds from East Anglia and Hull date from Godwin's pollen Zone VII, while those from Glastonbury are from Zone VIII, and more precisely from the Iron Age (700 BC to AD 43) (Northcote 1979).

Remains of Dalmatian Pelicans have been found in late Eneolithic (approximately 5,000-4,000 BC) deposits at Vlaardingen, Netherlands (Clason & Prummel 1979), including nine bones of at least three individuals. There is also an undated record of an unidentified pelican from the Maasvlakte, Netherlands, which was discovered during dredging operations to create new waterways (Kompanje & Kerkhoff 1991). Skeletal remains of Dalmatian Pelicans have also been reported from Denmark (Northcote 1979), where there are six verified specimens and one of a pelican unidentified to species. Six of the specimens were dated to Jenssen's Danish pollen zones VII and VIII, which correspond to Godwin's zone VII, a period spanning 5,000-2,000 years BC (Northcote 1979).

Clason & Prummel (1979) quoted Pliny, who stated that Dalmatian Pelicans formerly bred in the estuaries of several major European rivers, including the Rhine, Scheldt and Elbe. Furthermore, they speculated that the disappearance of the pelicans was at least partly due to the loss of the biotope which supported this species.

Great Cormorant

Two subspecies of Great Cormorant presently occur in northwest Europe: the nominate *carbo* and the 'continental' form *sinensis*, the former being significantly larger than the latter (Ericson & Hernández Carrasquilla 1997). The nominate form is currently restricted to the coastal regions bounding the northern and western perimeters of the region, although this was apparently not always the case. Ericson & Hernández Carrasquilla have shown that during the prehistoric and early historic (AD 500-1,000) periods, *carbo* was present in southern Sweden throughout the year. Today, only *sinensis* breeds there, but is joined by birds of the nominate form in winter. The same appears to have been true in Denmark, and possibly elsewhere in Europe in earlier times, and it may be that *sinensis* is a relative newcomer to western Europe (Stewart 2002b).

The modern trend is for *sinensis* to be more of an inland bird, while *carbo* has come to favour a marine environment, being replaced by *sinensis* as the latter extended its range into northwest Europe. The preference of *carbo* for coastal environments in Britain may have led to misconceptions regarding this species' preferred habitat. There has been recent topical controversy resulting from Great Cormorants becoming re-established in freshwater habitats in Britain. The Wildlife and Countryside Act of 1981 introduced full legal protection to the species, leading to increased numbers in freshwater habitats (such as flooded quarries and gravel-extraction workings, many of which may resemble former habitats), where gamekeepers had formerly controlled them. This led to claims by sports fishermen and fish farmers that the birds were colonising freshwater habitats as a result of overfishing at sea. There is, however, clear evidence that Great Cormorants formerly bred in freshwater habitats at Glastonbury, where skeletal remains of young birds have been found, confirming that inland breeding occurred here during the Bronze Age (2,400-700 BC) (Bulleid & Gray 1911-17). Furthermore, examination of the remains suggests that these birds appear to belong to the larger, nominate subspecies.

Pygmy Cormorant

The Pygmy Cormorant has been found just once in the British archaeological record, the remains coming from a timber-lined well on an archaeological site in Stert Street, Abingdon, Oxfordshire (Cowles 1981). This appears, however, to be the sole record from northwest Europe. Although there is no evidence to suggest that this specimen, dated to the fifteenth or sixteenth century, originated from a breeding colony in Britain, the climate during the time when the Abingdon timber-lined well-shaft became filled might have been warmer than that at present, as vines are known to have been grown in Abingdon in about 1380. It was not long after this, however, that the climate deteriorated dramatically, with several severe winters recorded during the 1430s (Cowles 1981). Today, Pygmy Cormorant breeds no farther west than Albania and Macedonia, but remains fairly common and widespread in wetlands bordering the Black, Caspian and Aral Seas, and through Asia Minor east to Iran.

Another example of an exotic bird found in the archaeological record, dated to a similar period, came in the form of a parrot (Psittacidae), not identified to species, which was found in a pit-fill dated to the mid to late seventeenth century at Castle Mall, Norwich (Albarella *et al.* 1997). This parrot clearly did not represent a breeding species in Britain but was found on an archaeological site. It would, therefore, be wise to treat the remains of the Pygmy Cormorant with equal caution, unless the species is found again and in a natural context, thus eliminating doubt over its origins.

Little Egret and Great White Egret

In recent years, Little Egret has become established as a regular breeding species in Britain (Lock & Cook 1998). The species' recent expansion into northwest Europe is attributed to an increased north-westerly post-breeding dispersal which led to birds overwintering in these areas and subsequently remaining to breed. Greater protection from persecution as a result of the EC Birds Directive may also have been influential (Lock & Cook 1998). There are no archaeological or palaeontological records of Little Egret in northwest Europe (though see Bourne 2003), but remains of Great White Egret have been discovered on two occasions: from a medieval urban site in Amsterdam and a late medieval castle in Breda, both in The Netherlands (www.archis.nl). Until recently, Great White Egret bred no closer to Britain than eastern Austria, although in recent years small but expanding breeding populations have become established in The Netherlands and northwestern France.

Night Heron and the extinct heron *Nycticorax fenensis*

The archaeological and fossil record of the Night Heron is not extensive. Remains have been found in the London area, discovered in a food refuse deposit (Harrison 1980), and two further records exist in The Netherlands: one from Haarlem dated from the late medieval to early post medieval period, and one from Zutphen with an early medieval date (www.archis.nl). Today, Night Heron breeds as far north as the English Channel but its occurrence in Britain remains sporadic.

The extinct heron *Nycticorax fenensis* was described by Friant (1950), based on two specimens currently housed in the Sedgwick Museum, Cambridge. Although these were originally identified as Great Bittern, Friant believed them to belong to an extinct species of night heron. Given this uncertainty, a detailed re-examination of these specimens is required.

Greater Flamingo

There is a single archaeological record of Greater Flamingo in northwest Europe, coming from the Neolithic 'northern site' at Kolhorn, Netherlands (Zeiler & Clason 1993). This was attributed to a warmer climate than exists today, as well as the presence of a saltwater lagoon in the vicinity of the site. The author has seen the specimen, which is poorly preserved, and would like to examine it further before accepting it without question.

Eurasian Spoonbill

Although Eurasian Spoonbills formerly bred in southern and eastern England (Gurney 1921; Whitlock 1953; Harrison 1982), breeding ceased during the seventeenth century, probably because of a combination of hunting and the draining of the species' favoured breeding and feeding sites. Today, it still breeds in several colonies in The Netherlands, where numbers appear to be increasing and expanding into northern Germany. Recent breeding attempts in Britain have met with mixed success, but its re-establishment as a regular breeding species seems a distinct possibility. Within the published literature, there remains the possibility of confusion between Eurasian Spoonbill and Shoveler *Anas clypeata*, as these species were often given the same local and regional names.

In The Netherlands, there is a record of Eurasian Spoonbill from the Roman castellum Velsen I



Roy Tipper

21. Night Heron *Nycticorax nycticorax*, Utah, USA, June 1999. Archaeological remains of Night Herons have been found in the London area, while bones found in Cambridgeshire may have belonged to an extinct species of *Nycticorax heron* (see text).



Reston Kilgour

22. Eurasian Spoonbills *Platalea leucorodia*, Cley, Norfolk, June 1999. Spoonbills bred in southern and eastern England until the seventeenth century, when the combined effects of hunting and wetland drainage were probably responsible for the extinction of these breeding populations. Will we see them become re-established at sites like Cley in the foreseeable future?

dated to AD 15-30 (Prummel 1987, 1993). Prummel (1987) assumed that the remains of the spoonbill were of one which had died naturally, owing to the past belief that birds which eat fish, along with shellfish-eating birds, are unpalatable. There is also a single archaeological record from Poland, dated to the early medieval site at Santok (Bochenski 1993).

Common Crane

The Common Crane has a relatively good palaeontological and archaeological record, having been found at numerous Holocene sites of various ages in Britain (Newton 1901; Boisseau & Yalden 1998) and northwest Europe (e.g. Bochenski 1983, Zeiler 1991, Prummel 1993, Zeiler & Clason 1993, Stewart 1999). Crane bones are common in the record, being found among domestic waste in towns as well as in peat deposits. Reference to cranes being eaten can be found in many texts. For example, in a list of presents sent to William Moore of Losely to mark his daughter's wedding on 3rd November 1567, there is included nine cranes 'out of the marshland in Norfolk' (Simon 1944). Other texts mention that 'Crane is hard of digestion and maketh yll juice, but beyng hanged up longe in the ayre, he is the less unholosome' (Simon 1944). The latter probably accounts for the fact that Common Crane subsequently became 'no longer sought after; such is changing fancies of English fare' (Smith 1949).

The formerly widespread distribution of Common Crane in Britain is further illustrated by the large number of place-names which include local and traditional names given to the bird (including prefixes such as 'cran', 'trani', 'cron', 'corn' or 'cranuc'; Boisseau & Yalden 1998), and documentary evidence (Southwell 1901). Common Cranes probably became extinct as breeding birds in Britain in the sixteenth century (Whitlock 1953) and in countries such as Denmark in the early nineteenth century, but in the remote marshlands of Scandinavia and Poland, substantial breeding populations still exist (Cramp & Simmons 1980). Recolonisation of Denmark began in 1925 (Cramp & Simmons 1980) and recently it has become re-established as a breeding species in East Anglia (Boisseau & Yalden 1998).

The existence of unusually large crane bones in the fossil record has led some authorities to attribute these to an extinct late Pleistocene species *Grus primigenia* (e.g. Harrison & Cowles 1977). A number of authors have used a variety of methodologies to address the question of the validity of *Grus primigenia*. Their arguments have been based primarily on analyses of non-biometric osteological traits, as well as on the zoogeographic distributions of the fossils in relation to modern taxa, balanced

against perceptions about the significance of these types of information.

In order to investigate the identity of these large cranes, Stewart (1999) conducted a detailed survey, measuring crane bones, both from the fossil record and from modern specimens, regardless of whether they were previously assigned to Common Crane or *G. primigenia* (or indeed other species of crane which do not now occur in the region). This demonstrated, for the first time, that the bones of male Common Crane are larger than those of the female. In the initial stages of the work on the British material, it seemed possible that the lack of female-sized specimens in the fossil record could be part of the problem. If the Common Crane has diminished in size during the Holocene, since about the Roman era, it is possible that ancient females were approximately the size of modern males, while larger specimens, hitherto named *Grus primigenia* may, in fact, be male Common Cranes. If this hypothesis is correct, Common Crane and *Grus primigenia* are synonymous.

An alternative explanation, that another species, extinct or extant, is involved, cannot be wholly eliminated, but to suggest that the large cranes were conspecific with the extant Common Crane is a more parsimonious explanation of the lack of fossils the size of modern females, since it is unlikely that there were consistently no small females preserved in the fossil record.

The mechanism responsible for the change may be similar to that which has apparently led to a size reduction in Mute Swans (Northcote 1981, 1983), namely the effects of habitat destruction and impoverishment by wetland drainage. The fact that both species appear to have shown significant size reduction during approximately the same time period is strong evidence for a similar cause, and suggests that domestication is not responsible for the change in Mute Swan size.

Black Tern

There appear to be just two records of Black Tern in northwest Europe from the archaeological or palaeontological record for the Holocene. These include one from the late Holocene site of Duzej Sopwy Cave, Poland (Bochenski 1993), and two bones from Haithabu, Germany (Reichstein & Pieper 1986). Although Black Tern formerly bred in large numbers in Norfolk and Lincolnshire until the first half of the nineteenth century (Whitlock 1953), it subsequently declined and was lost as a breeding species to Britain, and there have been only sporadic breeding attempts in recent years (Taylor *et al.* 1999). It may be reasonable to question whether, in light of this fact, the species has been adequately



Wendy Dickson

23. Common Cranes *Grus grus*, Burrafirth, Unst, Shetland, April 1999. This species has a comparatively good palaeontological and archaeological record, and its remains have been found at numerous Holocene sites of various ages in Britain, commonly among domestic waste in towns.



David Tipling/Windrush

24. Immature White-tailed Eagle *Haliaeetus albicilla*, Finland. Archaeological and palaeontological evidence suggests that White-tailed Eagles formerly bred in the lowlands of south and southwest Europe, whereas today they breed only in the north and northwest. The species was perhaps not uncommon as an urban scavenger before it became widely persecuted.

considered when tern bones have been identified in the archaeological record, for example at Baynard's Castle in London (Bramwell 1975). In this instance, both Sandwich Tern *Sterna sandvicensis* and Common/Arctic Tern *S. hirundo*/*S. paradisaea* bones were identified. Black Tern bones are unlikely to be mistakenly identified as those of Sandwich Tern, which is significantly larger, but the latter two species, being much smaller, may cause problems.

White-tailed Eagle

It was owing to persecution by gamekeepers and farmers that White-tailed Eagle became extinct throughout much of Britain during the eighteenth and nineteenth centuries, although it had already suffered losses as a result of wetland drainage in earlier times (Whitlock 1953). White-tailed Eagles remained in the coastal regions of western Scotland until 1916, when the last-recorded nesting attempt prior to the recent reintroduction took place on Skye. The Marsh Harrier disappeared as a breeding species in Britain at about the same time but has subsequently recovered without the help of reintroductions.

The present distribution of White-tailed Eagle is concentrated in northern and northwestern Europe, it being most abundant in the coastal regions and upland areas of Scandinavia. Written records, together with both archaeological and palaeontological finds, show a quite different picture (Reichstein 1974; O'Connor 1993), and it seems that White-tailed Eagles probably bred in the lowlands to the south and southwest of the region. Skeletal remains are relatively common on archaeological sites, and this species may have held a religious significance at certain times (Parker 1988). Furthermore, a predominance of wing bones suggests that its feathers may have been used at other times for fletching arrows (Reichstein 1974). Finds at Haithabu, Germany, indicate it to be the most common wild species for which remains were found, since 184 bones, representing a minimum of 32 individuals, were discovered (Reichstein & Pieper 1986). It is possible that in the past, before it became widely persecuted, White-tailed Eagle may have behaved as an urban scavenger.

Discussion

Lister (1996) recently described the primary ways in which terrestrial vertebrates respond to environmental change. These consist of behav-

ioural accommodation, distributional shift, phenotypic modification, evolution and extinction. Of these, the destruction of wetlands has certainly brought about local extinctions as well

as distributional changes, and may also have led to evolution or phenotypic modifications (e.g. size reduction) in some species, including Mute Swan and Common Crane. Rapid and significant environmental changes leading to evolutionary change in species might cause us to mistakenly believe that an extinction has taken place when, in fact, the skeletal size of modern species may be significantly different from that of their ancestors. This may have been the case with Common Crane, which appears to have become smaller during the later Holocene in Britain; alternatively, the larger birds discovered in the fossil record may represent a species, or subspecies, which became extinct during the seventeenth century.

The long-term effect of global warming on birds has received much attention lately. For example, Moss (1998) considered the possible consequences of this phenomenon, including the higher survival of wintering species, expansion and contraction of breeding ranges, changes in feeding grounds of passage migrants, and the effects on the food supply of intertidal feeders owing to rising sea level. It may be the case that the recent establishment of breeding populations of certain species in Britain, including Little Egret, Eurasian Spoon-bill and Common Crane, together with increases in the Cetti's Warbler *Cettia cetti* population and the gradual northward expansion in Europe of species such as Black-winged Stilt *Himantopus himantopus*, is a result of global warming. 'New' breeding species are initially encountered as vagrants, some of which may eventually remain or return, and establish viable breeding populations. Of course, not all vagrants will become breeders, but this pattern gives added importance to vagrants, and single records of species in the fossil record should not necessarily be dismissed (Schelvis 1993). Alternatively, the appearance of new species in an area may result from human interference.

Although there have been many changes in bird distribution in recent years, a large number cannot be attributed to a particular cause, and historical change, apparent only in the fossil record, will inevitably prove more difficult to explain. Perhaps the best example of a species that has undergone unexplained distributional change is the Collared Dove *Streptopelia decaocto*, which first reached northwest Europe from the east during the 1950s. No satisfactory explanation has yet been proposed that ade-

quately describes why it increased so far and so fast, spreading at least 1,900 km in 20 years (Fisher 1966).

Drainage has had a dramatic effect on wetland birds in northwest Europe, but it is also important to recognise that some of the changes in distribution which took place when large parts of our wetlands were being drained may have been 'natural' and would have happened regardless of human intervention. It is perhaps another facet of human arrogance to assume that any and all changes in distribution are down to us. Any information regarding ancient records of rare, unexpected or lost bird species are of value and may help to reconstruct the so-called 'natural' condition of the northwest European avifauna of the past. The archaeological record is an invaluable tool in this regard and future finds may lead to a better understanding of our lost Holocene avifauna, and therefore should perhaps be reported to organisations which determine conservation policy.

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Letters

Zino's Petrel and a new radar station in Madeira

Following the publication of Bill Bourne's letter on the subject (*Brit. Birds* 96: 260), I would like to clarify some points regarding the development of a military radar station in Madeira.

The Sociedade Portuguesa para o Estudo das Aves (SPEA), together with BirdLife International, instigated a campaign in December 2002 concerning the location of a radar station near the breeding grounds of Zino's Petrel *Pterodroma madeira*, the most threatened bird in Europe. From the very early stages of the proposed development, SPEA asked the Portuguese Government for a full and appropriate assessment to be conducted, which could take account of the requirements and conservation objectives of the EU's Birds Directive. The proposed site is designated as a Special Protection Area (SPA), and therefore has the highest level of protection under European law.

The decision to launch this campaign was related to two main issues. First, the possible (and as yet unknown) impact on the petrels during the construction and operation of the radar. Arguments which suggest that the radar station will have little impact once it is in operation are not backed by conclusive research, while construction on the site originally chosen (see below) would have adversely affected the landscape and quite possibly the Zino's Petrel population unless appropriate measures to

minimise disturbance were implemented. For example, the breeding season of Zino's Petrel runs from March to December, making it virtually impossible to carry out construction work during the non-breeding season.

Secondly, the lack of transparency by the Portuguese Government was the main concern of those running the campaign, particularly the lack of a public Environmental Impact Assessment and the Government's failure to deliver a clear and definitive statement explaining the necessary steps and precautions to take when dealing with such a vulnerable species.

The location of the radar station has now been changed to a site which has already been developed. The Government has not confirmed, however, whether any alternative leisure areas will be created once the existing hostel is demolished: the top of the Areeiro mountain is one of Madeira's most visited areas.

SPEA and BirdLife's request for the disclosure of the EIA has meant that this is now available on the internet at www.mdn.gov.pt. Although the document contains no conclusive proof that the construction and operation of the radar station will have no negative impact on the population of Zino's Petrels, we are happy to see that the Government is now following proper procedures.

Helder Costa

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Medieval Little Egrets and others

I am not sure that 'popular belief' was ever wholly convinced by the earlier suggestions that the 'Egretys' of the medieval banquets were really Northern Lapwings *Vanellus vanellus*, but it is quite splendid to have Bill Bourne's recent and thorough reassessment of this picturesque subject (Bourne 2003). This is doubly welcome. Not only does he provide convincing evidence (to my mind at least) that Little Egrets *Egretta garzetta* were indeed breeding commonly in England in the fifteenth century, but he has also no less convincingly identified the Night Heron *Nycticorax nycticorax* as another item on the menu at those awesome medieval banquets.

But I would query his conclusion that the subsequent disappearance of these 'Mediterranean' herons from the English scene was due primarily to the impact of the Little Ice Age, to which Williamson (1975) ascribes the approximate period of 1550 to 1810. As a migratory species, the Little Egret had the capacity for avoiding the worst effects of the hard winters which characterised that period. As a breeding bird it had evidently survived the two centuries of deteriorating summers which preceded the Little Ice Age, and which had caused the abandonment of vine-growing in England by the end of the fourteenth century. Bourne refers to

the Act Elizabeth 1564; the inclusion of 'Egrytes' in the protective provisions of that Act suggests strongly that Little Egrets were then still breeding in England, and that they were perceived as being in need of protection from human persecution – even before the Little Ice Age had begun to bite. As Bourne recounts, 1,000 'Egryttes' had helped to furnish the table of the newly enthroned Archbishop of York in 1465. Even allowing for a measure of exaggeration, extravagances of this order must have made unsustainable inroads on the population of a species whose colonial nesting habits made it particularly vulnerable to such intensive assault. This certainly proved to be the case in the early 1900s, when the feather trade brought the Little Egret and other similar birds close to extinction. I suggest that it was human persecution, rather than climate, which was the primary cause of the extinction of the Little Egret in Britain, which one might surmise took place around 1600.

The final paragraph of Bourne's paper also calls for some comment. Bullock did not find a pair of Great Auks *Pinguinus impennis* during his visit to Orkney in June/July 1812. There had indeed been a pair at Papa Westray, apparently for several years, but the female had been killed there in 1811. Bullock participated in a sea chase after the survivor, but without success, and it was not until the following year that the bird was killed and the skin sent down to him (Buckley & Harvie-Brown 1891). The remarkable feature of this whole story, as pointed out by Newton (1898), is that there had been no evidence of the Great Auk in Orkney waters prior to the Papa Westray saga (see Low 1813).

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Bourne goes on to say that Bullock, during his visits to Orkney and Shetland in 1812, 'found... breeding Snowy Owls *Nyctea scandiaca* and King Eiders *Somateria spectabilis*'. This implies authoritative acceptance of Bullock's records. But his record of King Eider, as reported to Montagu (1813), is remarkably ambiguous and lacking in detail. No less remarkable is the fact that he never seems to have published his own account of such a unique discovery, as one might have expected in his 1812 paper. Did he have second thoughts? Certainly, the record has been generally discounted by subsequent authors, explicitly so by Baxter & Rintoul (1953). Baxter & Rintoul also regarded the earlier reports of breeding by Snowy Owls in the Northern Isles as inadequately authenticated, although in this case one might feel that Bullock's account, together with that of Saxby (1874), was strongly persuasive, and thus supportive of Bourne's case.

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Birds and past agriculture

Bill Bourne's letter (*Brit. Birds* 96: 462) raises some interesting points, and I would like to comment on three.

First, he may be right to speculate that more open country might have existed in prehistoric habitats than the conventional view of the spread of forest following glaciation allows: see, for example, Vera (2000). Nevertheless, anyone looking now at the structure of farmland bird populations in Britain finds an anomaly. The

great majority of the species concerned derive from forest habitats rather than plains and open country. O'Connor & Shrubbs (1986) observed that typical open-country or steppe species remained poorly represented. They noted that lowland farm bird communities in Britain were thus very different from those of North America and Africa, where much farmland had been created from plains habitat, and open-country species were more diverse and

numerous. One factor which presumably enabled forest species to adapt to farmland in Britain is that many of those concerned, for example pigeons (Columbidae), thrushes *Turdus*, finches (Fringillidae) and corvids (Corvidae), feed to a large extent on the ground. They would have had little difficulty, therefore, in colonising and adapting as field species, as long as some tree and shrub habitats persisted.

Second, I am sure that Bourne is right in suggesting that some southern European bird species extended into Britain in the Medieval Warm Period, perhaps particularly herons (Ardeidae). But examination of such sources as the illuminations of medieval manuscripts and the Tudor ordinances proscribing birds as pests suggests to me that the basic structure of farmland bird populations in Britain has been set and remained rather stable over a long period of time, a point I have made recently (Shrubb 2003b).

Third, I doubt very much whether the open or common fields were ever particularly significant habitats for breeding birds. Accounts of their development and management, for

example Thirsk (1964), suggest strongly that they were rather 'busy' habitats, with fairly high levels of disturbance likely to discourage occupation by species such as Great Bustard *Otis tarda* and Stone Curlew *Burhinus oedipnemos*, just as regular cultivation would have discouraged wheatears *Oenanthe*. These were species rather of the extensive semi-natural habitats of the Waste (see Shrubb 2003a), and I suggest that the common fields were mainly overspill or sink habitats for such species if they used them. Incidentally, Thirsk (1964) also argued that common field systems were not fully developed in pastoral districts and that such 'early enclosure' should be viewed in that light.

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The enigmatic Hoodwink

Surely the word 'enigmatic' is usually applied in ornithology to any bird which the author does not know very well. It seems particularly surprising that Simon Aspinall, who is troubled by the incidence of enigmaticity (*Brit. Birds* 96: 408), fails to mention the most enigmatic bird of all, the Hoodwink *Dissimulatrix spuria*, described by the greatest authority on the

subject, the late Professor M. F. M. Meiklejohn, in his immortal 'Notes on the Hoodwink' (*Bird Notes* 1950, reprinted in *The Bird Notes Bedside Book*, Gwen Davies (ed.), RSPB, Sandy, no date, pp. 81-84). I suspect I saw it occasionally in his patch, the United Arab Emirates, where I also heard of a great many more – can he be overlooking them?

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Notes

Aggressive behaviour in Red Grouse

At about midday on 28th December 2002, I was walking along a track on Barden Moor in Wharfedale, North Yorkshire. Quite suddenly, a Red Grouse *Lagopus lagopus*, which had been calling from nearby heather *Calluna/Erica*, appeared in the open just 10 m away from me, with head and neck upright, red wattles distended and making low-pitched crowing calls ('tuow') which appeared to be directed at me. Gradually, it made its way towards me, and when about 2 m away it made several lunges at me with wings drooped, stopping just short of my legs. I turned to walk away, and immediately felt a light blow on the back of my neck. I turned to face the bird again, and this time it came so close to my feet that I could have

picked it up. Again it struck me on the neck as I walked away.

I had walked about 30 m along the track, assuming that I had emerged from its territory, when I received another light blow on the back of the neck, after which the grouse disappeared. The whole episode lasted about 15 minutes. I was wearing a red scarf and a maroon hood, and I wondered if this combination caused the bird to direct its aggression mainly towards the scarf at the back of my neck. I was aware that Capercaillies *Tetrao urogallus* can be aggressive towards humans, but did not realise that the same may be true of Red Grouse. It was an incredible experience.

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White Pelicans taking Feral Pigeons and ducks in St James's Park

Alan Gibson's note concerning a White Pelican *Pelecanus onocrotalus* taking a Feral Pigeon *Columba livia* in St James's Park, London (*Brit. Birds* 96: 252) describes a feeding habit which has been observed with some frequency since 1980. The first record of captive pelicans taking birds (ducklings) in the London area appears to have been in Kew Gardens in 1903 (Gillham 1987). From 1953 to 1984, I was a regular visitor to St James's Park, but it was not until 1980 that the first record of a captive White Pelican taking a Feral Pigeon came to my notice. From 1981 until late 1984, when I moved to the Kent coast, there were many such reports. On one occasion I saw two 'open-mouthed' White Pelicans each tossing a Feral Pigeon in its pouch. (From a study of the 'tossing' movements, it seemed clear that the object of this behaviour was to manoeuvre the pigeon's head so that it faced the predator's throat. When the pigeon's tail faced the throat,

the wings flopped outside the pelican's bill, preventing the prey from being swallowed.)

In 1982, this predatory behaviour led to all three White Pelicans being transferred elsewhere (as alluded to by Alan Harris, *Brit. Birds* 96: 406) and replaced by another five. By the summer of 1984, all five substitutes were known to have swallowed adult and downy Tufted Ducks *Aythya fuligula* and Feral Pigeons.

A friend of mine, Mr Audley Gosling, was also a visitor to St James's Park for many years, and his visits continued for 17 years after I left the London area. He now considers that the taking of Feral Pigeons was, at one time, so common that he ceased to record such incidents in his notebooks.

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EDITORIAL COMMENT Following this account of Eric Gillham's observations, we shall not publish further notes on this topic unless they contain information of particular or additional interest.

Reviews

THE RED CANARY: THE STORY OF THE FIRST GENETICALLY ENGINEERED ANIMAL

By Tim Birkhead. Weidenfeld
& Nicolson, London, 2003.
284 pages; eight colour plates.
ISBN 0-297-82996-3.
Hardback, £16.99.

The book tells the true story of a German schoolteacher, Hans Duncker, and others who attempted to breed a line of red Canaries *Serinus canaria* by hybridisation with captive Red Siskins *Carduelis cucullata* during the early to mid twentieth century. Tim Birkhead explores the history of bird-trapping and the wild-bird trade, the idiosyncrasies of bird-fanciers across Europe and their captive-breeding programmes. Therefore there is much here of interest to birdwatchers and

ornithologists, as the reader is dragged into the obsession with captive birds which has left the Red Siskin on the verge of extinction.

In recounting the story of Duncker, his pioneering work in the (then) new field of Mendelian genetics, and the application of genetic principles to avian pigmentation, the book does a fine job. It is also an easy read. While the history appears to be strong, however, the biology is surprisingly weak, sometimes poorly explained and even inaccurate. I suppose that in a popular book the science is going to be lightweight, but in several places I felt it would actually be easier for the layman to understand Duncker's work if there were some explanation of Mendelian genetics, modifier genes, genetic dominance, etc. I also objected to the title – Duncker may have been ahead of his time, but his work was not genetic engineering in any meaningful sense,

and the description of the red Canary as a transgenic animal is risible. Hype, even.

Duncker's single-minded use of genetics to improve his Canaries, and his enthusiastic support of 'genetic hygiene' in human society, led to his induction into the National Socialist Party in 1940, and he continued to promote eugenic policies publicly. Even after the war, he never disowned the Nazis. Such an association casts a long shadow, which may explain why Duncker has not until now received popular recognition for his scientific work. The author deserves much credit for tackling this subject, and the 'take-home message' of the story – that the action of genes cannot be dissociated from their environment – and its implications for the 'nature versus nurture' fallacy, are well argued. It is worth a (critical) read.

Martin Collinson

BLOKES AND BIRDS

Edited by Stephen Moss.
New Holland, London, 2003.
96 pages; black-and-white
photographs.
ISBN 1-84330-484-8.
Hardback, £6.99.

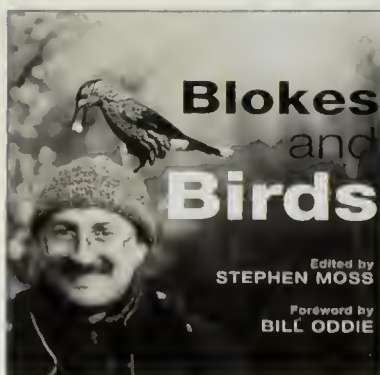
What is the purpose of this book? No doubt aimed at the Christmas stocking market – and thence to the smallest room in the house – *Blokes and Birds* fulfils all the stereotypes that hiriders have sought to shrug off over the past 30 years. Indeed, arch-feminist that I must be, I didn't 'get' the title at first because it is 30 years since I had to fend off all those nudge-nudge jokes at school: 'Interested in birds, eh? I hope you mean the two-legged kind!' Mark Cocker, as revealed in his infinitely superior *Birders: Tales of a Tribe* (Brit. Birds 94: 447), suffered the same curse. And, as he observes, have you ever

seen a three-legged girl?

The inspiration for this book is an earlier New Holland title called *Men and Sheds* (by Gordon Thorburn, if you want to seek it out for that special person in your life). It is the same format of 40 men/blokes talking about their obsession in a handy-sized volume, illustrated with black-and-white photos. In *Blokes and Birds*, these photos show some of our finest birding specimens in a variety of strange poses (Mike Dilger – what were you thinking?!). The pictures are a credit to photographer Robin

Chittenden's inventiveness, but they suggest a better title for the book: *Nerds and Birds*.

Among the blokes featured in this volume are some of the most respected names in birding: Tim Appleton, Peter Colston, Ian Lewington, Tony Marr. It's written by Stephen Moss, who, as Bill Oddie's TV producer, has done so much to popularise birding, even give it 'street cred' – something that the teenage Pitches and Cocker craved. Bill Oddie provides an apologetic foreword to the book. I have friends and colleagues who feature in it – and they tell some great stories – but I'm still left asking 'Why?' Why was this book commissioned? If it is a celebration of the diversity and folklore of birders, then count me in. But the book's title and packaging suggests it is a birding freak show for non-birders to laugh at, and we can laugh at ourselves far more effectively (have you seen my British list?). Indeed, *Birders: Tales of a*



Tribe has many such stories, often involving characters who resurface in *Blokes and Birds*.

There are some marvellous stories in this book – Dave Farrow and Craig Robson arrested in Tibet after rediscovering Kozlov's Bunting *Emberiza koslowi* and then forced to write a self-criticism by the Chinese police; Neil Morris

finding God and the Winspit Red-flanked Bluetail *Tarsiger cyanurus*; Stuart Winter in the USA – two birding nationalities divided by a common language. But I feel that the (female) editorial director at New Holland, Jo Hemmings, has missed an opportunity here. Where are the women's stories? I'd like to hear from top twitcher Sue Johns,

Oriental expert Carol Inskipp, RSPB's head of international research Debbie Pain and BirdLife Europe specialist Melanie Heath to name just four of the 40 female storytellers we could have heard from. And the book's title? *Birds and Birds* of course.

Adrian Pitches

THE BIRDS OF MOROCCO:
AN ANNOTATED
CHECKLIST

By Michel Thévenot, Rae
Vernon and Patrick Bergier.

BOU Checklist No. 20,
British Ornithologists' Union
& British Ornithologists' Club,
Tring, 2003.

606 pages; 2 colour plates; 74
colour photos; figures & tables.

ISBN 0-907446-25-6.

Hardback, £45.00.

Modestly subtitled and adorned by David Nurney's splendid coloured illustration of a male Moussier's Redstart *Phoenicurus moussieri*, this book is nothing less than a substantial and well-researched avifauna of one the Western Palearctic's most exciting birdwatching destinations.

Following the usual preliminaries, a 33-page introduction sketches in much necessary background information under a dozen main headings: general history, the history of ornithology in Morocco, geology, climate, flora and vegetation, geographical divisions and habitats, breeding birds, migration and movements, endemism, biogeographical affinities of the Moroccan avifauna, changes in status, and conservation. Many interesting facts are contained under these headings; for example, it is sobering to note that while just ten breeding species are known to be increasing in both range and numbers, no less than 34 are now extinct or under threat. Numbered among the extinctions is a sprinkling of the usual suspects (e.g.

White-headed Duck *Oxyura leucocephala*), as well as a few less obvious candidates (e.g. Common Tern *Sterna hirundo*), while those threatened include Small Button-quail *Turnix sylvatica* (here thankfully referred to by the more evocative English vernacular name of Andalusian Hemipode) and Northern Bald Ibis *Geronticus eremita*, a species which, apart from a very small population in Syria, is now confined in the wild to coastal Morocco.

The bulk of the book is taken up by the systematic list, which, apart from certain changes adopted

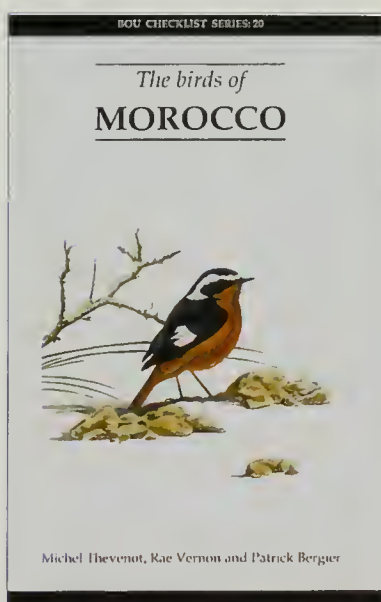
noted under individual species accounts. The species accounts are well laid out and packed with much valuable information, and will hopefully encourage enquiry into current gaps in knowledge (the breeding status of Slender-billed Gull *Larus genei* is, for example, presently unclear) as well as enabling visiting birdwatchers to put their own observations into context.

There are four appendices, one of which details species omitted from the systematic list and includes a number not accepted by the Moroccan Rare Birds Committee. At this stage of Moroccan ornithology, it seems to me a wise decision to publish these currently unacceptable records, rather than consign them to ornithological oblivion.

The colour illustrations, grouped together in a block in the centre of the book, consist of two plates depicting geology and main habitat types and 74 well-reproduced photographs. No less than 52 photos are devoted to habitats and admirably succeed in conveying the flavour of the landscape, while the remainder are pleasing studies of some of the special birds – such as Desert Sparrow *Passer simplex* – which make this accessible corner of northwest Africa so attractive to birders.

In conclusion, this volume is undoubtedly a significant contribution to the ornithology of Palearctic Africa. The authors and everyone concerned in its production deserve congratulation and great credit.

Pete Combridge



by the BOU and published in *Ibis* during 1999-2002, follows the sequence and nomenclature used by BWP and *BWP Concise*. Nomenclature will thus be familiar to readers of *British Birds*, though, where relevant, possible or probable future taxonomic changes are

A BIRDWATCHING GUIDE TO BRITTANY

By Stephanie Coghlan. Arlequin Press, Chelmsford, 2003.
109 pages; colour illustrations; line-drawings; maps.
ISBN 1-9001-5986-4. Paperback, £10.95.

The value of a site guide depends upon the completeness and accuracy of the information provided, and the ease with which it can be accessed. Sadly, this book falls short on both counts.

The sites described are grouped according to five administrative regions, with the most interesting given one, two or three stars. Access details appear comprehensive and each site is referenced to a Michelin map. Maps are included for some sites, but with no scale, while the map legend is lost in the middle of the introductory text. Each site is described briefly and a selection of species is listed. Those selected are an eclectic choice and it is frequently unclear from these listings why one would want to visit the site. For instance, Trevignon (two stars) is said to hold 75 breeding species, some rare in the region, yet only Great Crested Grebe *Podiceps*

cristatus, Common Coot *Fulica atra* and Grey Heron *Ardea cinerea* are listed. Similarly, La Chaussee Neuve (three stars), in Le Parc Naturel de Briere, is said to be spectacular in winter, with many species of duck; yet only Common Shelduck *Tadorna tadorna* and Mallard *Anas platyrhynchos* are mentioned! Species are listed in random sequences, as if in the order in which the author happened to see them. There is no index or comprehensive table of contents, so finding a locality requires knowledge of which region it is in and then a search through that section of the text. That is made difficult by a cramped layout and the use of identically sized headings for main areas and subsidiary sites.

Inconsistencies and lack of clarity also abound in the 'Bird Survey' (an annotated checklist). There is no definition of status

terms, abundance is not given for many species, yet for a few their French status is given. The survey appears to be a complete systematic list, including vagrants, but no authorities or references are given. The first-time visitor, at which the book is said to be aimed, might have been better served by omitting the vagrants and giving more information about key Brittany species. There are a few unfortunate typographical errors (e.g. 'Pallas's Warbler' for Pallas's Grasshopper Warbler *Locustella certhiola*). The photographs give a good impression of the varied habitats, and the vignettes by Dan Powell are attractive, but that captioned 'Shore Lark' looks remarkably like a Snow Bunting *Plectrophenax nivalis*.

This guide is nicely produced and identifies numerous sites to investigate, but for too many of them it is unclear just what is of interest there. This is a missed opportunity; with more careful thought and effective editing, the book could have been made into an invaluable guide.

Peter Oliver

THE USES AND CURATION
OF BIRDS' EGG
COLLECTIONS:
AN EXAMINATION
AND BIBLIOGRAPHY

By Martin Limbert. Peregrine Books, Leeds, 2003. 97 pages, one colour plate.
ISBN 0-9536543-X5.
Hardback, £25.00.

In 1931, that 'shrinking violet' of ornithological opinion, Richard Meinertzhagen, ventured his judgement on egg-collectors: 'They are all a dishonest, secretive lot of thieves and wreckers, selfish to a degree and quite careless of the birds whom they pretend to love.' Oology's reputation has been on a downward trajectory ever since, so it is a brave man who argues, if not

for egg-collectors, then at least in favour of egg collections themselves. Martin Limbert presents a persuasive, dispassionate, carefully researched case that we should acknowledge the scientific value of historically assembled collections, rather than hiding them away in embarrassment and shame. While he gives no comfort to modern egg theft, he points out that collections enabled scientists like Derek Ratcliffe to unravel the part played by agricultural pesticides in the thinning of Peregrine Falcon *Falco peregrinus* eggs. Limbert also cites other instances of important egg-based research, including egg thinning in four British thrushes (Turdidae) – a possible consequence of acid rain – evidence of chemical contamination in seabird eggs, and the phenological study of Dipper *Cinclus cinclus* and Song

Thrush *Turdus philomelos* eggs as an indicator of climate change.

Limbert makes the wider sociological point that oology is a part of ornithology's own past, which should be acknowledged as a simple historical fact, and, where necessary, we should recognise the benefits it has brought. Who, after all, would deny that the Reverend F. C. R. Jourdain made a huge contribution to ornithology? Even Meinertzhagen acknowledged that much. Not everyone will agree with the author's sentiments, particularly his argument for new, scientifically supervised, egg assemblies. Hopefully we can accept that these issues deserve to be considered with an open mind, and Limbert should be commended for stimulating an important debate.

Mark Cocker

News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

Green light for Red Kites – and Great Bustards

The bold plan to release Red Kites *Milvus milvus* on the fringe of urban Tyneside (see *Brit. Birds* 96: 409) has received a major cash injection with a grant of over £300,000 from the Heritage Lottery Fund (HLF). This, the latest (and possibly the last) of the releases in the English Nature reintroduction scheme, which started in 1989, will take place in the Derwent Valley, in Gateshead. Gateshead Council has pledged £250,000 over five years and Northumbrian Water is

putting up £30,000. The HLF's donation of £303,500 takes funding for the project to almost £600,000. The first release of up to 30 young kites is planned for summer 2004, with birds taken from the burgeoning population in the Chilterns. Further releases are planned for 2005 and 2006.

Meanwhile, the plan to reintroduce Great Bustards *Otis tarda* to Salisbury Plain (see *Brit. Birds* 96: 49) also looks set to go ahead in 2004 after Defra (the Department

for Environment, Food and Rural Affairs) granted the necessary licence for importation of bustard chicks from Russia. The Great Bustard Group plans to bring in 40 chicks each year for ten years in an attempt to establish a viable population in Wiltshire. Modelling studies indicate that Salisbury Plain could support 200 Great Bustards, but the group will be well satisfied if the scheme results in a self-sustaining population of 100 birds.

Windfarms threaten Great Bustards in Germany

While conservationists celebrate the imminent return of Great Bustards to the UK, the only remaining Great Bustard population in northern Europe faces a growing threat from wind turbines. There are approximately 100 Great Bustards in the Brandenburg province of eastern Germany, with 90% of the birds breeding in three groups in the Havelland-Fläming region. But there are also now 100 wind

turbines generating electricity in this agricultural area, and many more are planned.

Conservation campaigners Proact have sent an 800-signature petition to Brandenburg ministers, pointing out the ecotourism value of the local bustard population and querying the permission for construction of a windfarm within an Important Bird Area (IBA), and immediately adjacent to the Great

Bustard nature reserve on the Karower Platte and the European Bird Protection Area Fiener Bruch (go to the Proact website – see below – for a dramatic picture of bustards feeding in the shadow of the turbines). If you wish to express your concern, details of how to do so are also available on the website.

Link: Proact (www.proact-campaigns.net/ppsi/id41.html).

BSPB opposes windfarm on prime migration route

No, that wasn't a printing error. The Bulgarian Society for the Protection of Birds is campaigning against plans for a 25-turbine windfarm development on the Black Sea coast in northern Bulgaria. It is feared that the proposed development would endanger hundreds of thousands of migrant birds – particularly raptors, storks and pelicans – using the 'Via Pontica' flyway out of eastern Europe.

To underline the sensitivity of the location near Balchik, the BSPB undertook a comprehensive survey of autumn migration there between August and October 2003. The most significant result was that the planned windfarm site meets the BirdLife criteria for an Important

Bird Area (IBA) of Global Importance, in particular as a 'bottleneck site'. During the survey, some 9,000 pelicans (Pelecanidae), 87,000 storks (Ciconiidae) and 7,000 raptors passed through the area, the majority at heights below 120 m. More than 200,000 migrating birds of 122 species were observed during the survey.

The height of the migrating birds is significant. The first 12 turbines planned for Balchik will each consist of an 80-m-high pylon with three 40-m-long blades, so the blades will reach 120 m into the sky at the top of their arc. The turbine blades describe a circle of 0.5 ha in diameter – a total airspace of 6 ha for all 12 turbines. The

Environmental Impact Assessment submitted by the wind-power company was a one-page report by two observers, who concluded that the windfarm posed no risk to migrating birds after a mere 16 days of field observations. The BSPB strongly contested this flimsy document but the Regional Inspectorate of the Ministry for Water and the Environment was keen to rush through a decision on the EIA, and the windfarm was given the go-ahead. The BSPB has appealed against the decision, particularly as Balchik is now an identified IBA of Global Importance which should be designated as a Natura 2000 site upon accession of Bulgaria to the EU in May.

UK offshore windfarms update

Britain's first major offshore windfarm started transmitting electricity on 21st November last year. North Hoyle comprises 30 wind turbines, 7 km off Rhyl on the North Wales coast. The wind turbines will generate approximately 60 MW of power. A further 16 offshore windfarms have been given the go-ahead. By 2005, there could be more than 500 offshore wind turbines, generating over 1,000 MW. This is equivalent to the power produced by one large coal-fired power station. But future offshore windfarms may each generate 1,000 MW. The Government is planning a second round of much larger offshore farms with up to 200 turbines per farm. The week after North Hoyle went on-stream, a new Energy Bill listed in the Queen's Speech contained the proviso that planning permission for this new generation of 'mega windfarms' would be fast-tracked by the Department of Trade and Industry (DTI). A DTI-backed study into the impact of windfarms on UK bird populations, including the nine-turbine windfarm on the harbour wall at Blyth in Northumberland, can be downloaded from the following website: http://files.zite3.com/data/files/22/25/0/DTI_bird_study.pdf

Breeding Bird Survey online

The BTO/JNCC/RSPB Breeding Bird Survey (BBS) is now the main national survey which keeps track of changes in breeding numbers of common and widespread bird species in the UK. The BBS has recently gone online. BBS results for 1994-2002 are now available at www.bto.org/bbs. This website also shows species distribution maps, and BBS species lists by county or region. You can download a copy of the latest BBS report from the site and BBS surveyors can now enter their counts online. You can also see the latest mammal results from the BBS. If you are not already a BBS devotee, and would be interested in taking part, e-mail Mike Raven, BBS National Organiser, at the BTO: bbs@bto.org

One year on from the Prestige

One year after the sinking of the *Prestige* oil tanker off northwest Spain (*Brit. Birds* 96: 50, 93, 146), the Sociedad Española de Ornitología (SEO) has released a report confirming the devastating effect of the spill on seabirds. It is feared that almost a quarter of a million birds may have been affected. Carlota Viada, SEO's conservation director, reports: 'On conservative estimates, we consider that the 23,000 birds collected in Spain, France and Portugal comprise only 10-20% of the birds affected by the *Prestige* disaster, and therefore we estimate that the number of birds affected by the fuel is anywhere between 115,000 to 230,000.'

Recoveries of ringed birds show that those collected came from as far away as North America and Finland. Between 16th November 2002, when the first oiled bird was picked up, and 31st August 2003, a total of 23,181 birds belonging to more than 90 different species were collected, of which 6,120 were alive and 17,061 dead. The most affected region in terms of polluted birds was Galicia, which had more than 50% of Spain's registered oiled birds. The worst affected species was Common Guillemot *Uria aalge*, accounting for 51% of collected birds and more than 11,800 individuals, which means that it is now one of Spain's most threatened breeding birds. Of two breeding colonies existing in 2002, one has been wiped out completely, while only 2-4 breeding pairs remain at the other. Pollution of the fish the birds depend on is believed to be the key reason for the decline.

By 31st August 2003, 604 birds of 34 different species had been reintroduced into their natural environment following collection, a successful reintroduction rate of only 10%, but a respectable proportion given the condition of the birds and their high sensitivity to handling.

Long-lost long-leg lives!

BirdLife researchers have rediscovered the Long-legged Thicketbird *Megalurulus rufa* more than a century after it was last seen. The bird – last seen in 1894 – is endemic to Fiji and was discovered one year into a survey of rare birds in the Pacific nation. Fijian researchers found 12 pairs in Wabu, a remote forest reserve on Viti Levu, Fiji's largest island. The warbler was known only from four individuals collected between 1890 and 1894, and a handful of reports in the 1980s and 1990s, none of which were confirmed. Another subspecies, *Megalurulus rufa cluniei*, was discovered on the island of Vanua Levu in 1974 when two birds were seen, but it has not been relocated since.

Vilikesa Masibalavu, BirdLife co-ordinator for the Darwin Initiative-funded project, was the first to identify the bird. The team spent the next few days recording the species' beautiful warbling song, which was previously undescribed. The sound of the song echoing around the mountain valleys is perhaps the reason why the local people called it the *Manu Kalou*, or 'Spirit Bird', in the nineteenth century. Nine pairs were found along a 2-km stretch of stream bordered by dense thickets, indicating locally high population densities at an altitude of 800-1,000 m in this unlogged forest. Two of the pairs were seen with recently fledged juveniles. The next time the thicketbird was spotted, it was caught in a net and shown to government and community representatives, who have set aside the local area for conservation purposes and are keen to restrict logging in the area. BirdLife will now work with the community and the Department of Forestry to help ensure the long-term protection of this forest.

Link: BirdLife (www.birdlife.net).

All albatrosses on IUCN Red List

The 2003 IUCN Red List of Threatened Species included all 21 species of albatross for the first time. Black-browed Albatross *Thalassarche melanophris* moved from 'Vulnerable' in 2001 to 'Endangered' in 2003. All species of albatross are now identified as under threat on a global scale (compared with just 3 in 1996 and 16 in 2000). All are undergoing long-term declines, with significant numbers drowning after being caught accidentally on baited hooks used in longline fishing. BirdLife's 'Save the Albatross' campaign is trying to reduce the accidental bycatch of seabirds by encouraging longline fisheries to adopt appropriate mitigation measures.

South Africa has now become the fifth country to ratify the global Agreement on the Conservation of Albatrosses and Petrels (ACAP). Australia, Ecuador, New Zealand and Spain had already signed up to ACAP. South Africa's ratification now means that the agreement will enter into force on 1st February 2004. Although ACAP requires signatory states to take specific action to reduce seabird bycatch from longlining, it also calls for adoption of measures to eradicate introduced species such as rats and feral cats from breeding sites, to reduce disturbance and habitat loss, and to address marine pollution. BirdLife is now urging the UK, with its crucially important Overseas Territories, to ratify the treaty without delay – along with France, Brazil, Chile and Peru.

Link: IUCN Red List (www.iucnredlist.org).

Penguin pick-up approved by FO

Despite a plea by the RSPB, the Foreign Office has approved the collection of nearly 150 Rockhopper Penguins *Eudyptes chrysocome* from Tristan da Cunha by a South African zookeeper (see *Brit. Birds* 96: 661). Tristan is a UK Overseas Territory and the FO gave John Visser a permit to remove 73 pairs of Rockhoppers, classed as 'Vulnerable' on the IUCN Red List, in return for a 'donation' of £18,250 towards storm damage repairs – and the free delivery of 10 tonnes of cargo (saving Tristan about £2,500).

The RSPB's international specialist Sarah Sanders said: 'This is a dangerous precedent. Other UK Overseas Territories might now be encouraged to similarly exploit their wildlife resources to raise finance.' The penguins were quarantined in South Africa until December and were then destined for oceanaria and zoos in Japan, Malaysia and China.

Gwen Bonham

On 22nd November, a group of people gathered at the Natural History Museum, in Tring, to pay fulsome tribute to Gwen Bonham on her retirement from the BOU. Gwen joined the BTO in 1963 but, in 1987, ahead of the BTO's move to Thetford, she became the BOU's executive secretary and so stayed on in Tring. During the past 40 years, Gwen has been one of the best-known and best-loved figures in the world of ornithology.

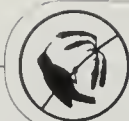
She has a flair for organisation, never said an unkind word about anyone and, even when provoked, would remain calm and smiling. Ornithology, like any profession, has its feuds and schisms; Gwen was able to rise above them. Following an address by Chris Perrins, the current BOU President, Gwen thanked her friends for their support over the years and singled out three BOU Presidents in particular. Ken Williamson and Bob Spencer have sadly passed away, while David Snow, her first BOU President, was unable to be there; all her other presidents and directors were present. Rarely can Lord Rothschild's extensive collection of stuffed animals have witnessed such a happy occasion. For three hours the galleries were ringing with laughter and the buzz of conversation. (Contributed by Christopher Helm)

Dodos died out later

The Dodo *Raphus cucullatus*, best known for being dead, probably didn't die out completely until about 1690 – almost 30 years later than previously thought. The species was first seen by Portuguese sailors in about 1507, but numbers were falling sharply by the beginning of the seventeenth century. This lumbering, 23-kg pigeon was driven to extinction through the destruction of its forest habitat, the killing of birds by sailors for food, and predation of its eggs by animals brought to the island on ships. The last confirmed sighting was on Mauritius in the Indian Ocean in 1662, but new calculations by scientists in Britain and the US suggest that they existed for another three decades.

The last confirmed sighting of the Dodo followed a 25-year gap in records, so the species had been rare for some years before its final demise. A pair of researchers, Andrew Solow, an ecological and environmental statistician at the Woods Hole Oceanographic Institution in Massachusetts, USA, and David Roberts, conservation biologist at Kew Gardens, took the ten most recent sightings of the species, from 1662 to 1598, and used a statistical analysis to estimate how long it was after that last sighting that the Dodo actually became extinct. The results, reported in the journal *Nature*, suggest that it finally died out, not in 1662, but 28 years later, in 1690.

The two researchers write: '... when a species becomes increasingly rare before its final extinction, it may continue to exist unseen for many years – so the time of its last sighting may be a poor estimate of the time of extinction.' Knowing the exact date of extinction of a species is important for understanding why an animal became extinct, and could thus prove useful in conservation of modern species. The mathematical method employed could also be used to predict how long existing threatened species, which have been seen only sporadically in recent years, may continue to survive.



Monthly Marathon

Photo no. 201: Sora

A novice birdwatcher looking at Monthly Marathon photo number 201 (*Brit. Birds* 96: plate 245, repeated here as plate 25) might wonder if the bird depicted in the photograph is a wader, with the stripes on the mantle possibly suggesting a species of snipe *Gallinago*. Along with the striped mantle, our bird also shows conspicuous white barring on the flanks. Taken together, these features do not fit any wader recorded within the Western Palearctic, so we need to consider which other families can show these characters. Many *BB* readers may have quickly concluded that the chunky shape of the bird suggests a rail or crake (*Rallidae*) but, with the head and bill hidden in the water, it is not immediately obvious which species this may be. Looking first at the white mantle stripes, this feature immediately rules out Water Rail *Rallus aquaticus*, while the smaller crakes, including Little Crake *Porzana parva* and Baillon's Crake *P. pusilla*, are generally more richly coloured on the mantle, tending towards rufous in Little Crake or chestnut in Baillon's. Remaining focused on the structure of our



Colin Bradshaw

25. Sora *Porzana carolina*, Porth Hellick, St Mary's, Scilly, October 1991.

bird, the primary projection appears fairly short, a feature compatible with Baillon's Crake but one which eliminates Little Crake. Returning to the mantle pattern again, Baillon's Crake usually shows scattered white 'doughnut' rings on the upperparts; these are lacking in this bird and, together with the dull brown tone to the upperparts, it is fairly safe to elimi-

nate Baillon's Crake.

The dull, medium-brown ground coloration of the upperparts is a better match for Spotted Crake *P. porzana*, so might that be the solution? The barring on the flanks would fit, as could the streaking on the mantle, but attention to other feather tracts throws up some anomalies. The back and sides of the neck look very plain,

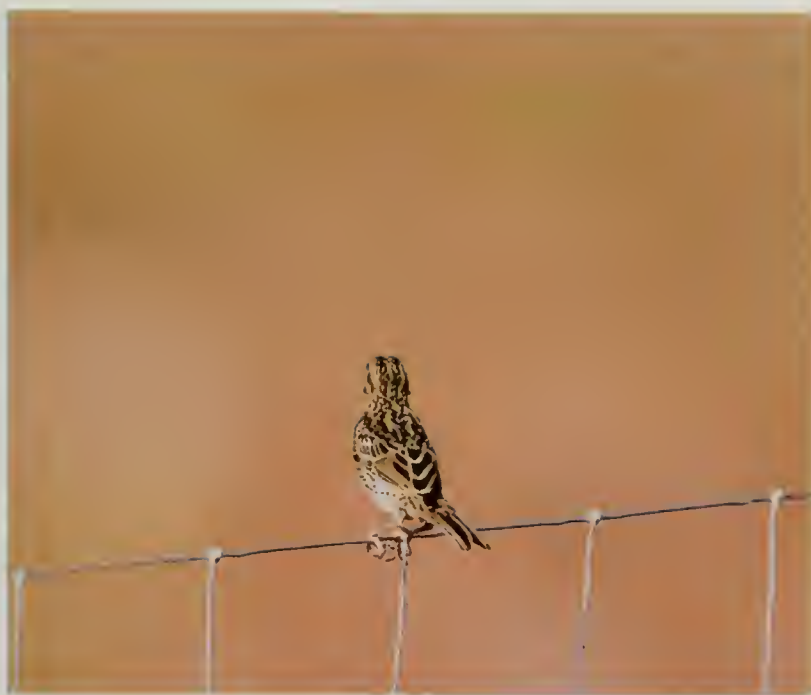
Monthly Marathon Rules

1. Only current individual subscribers to *British Birds* are eligible to take part. Entrants should give their name, address and *BB* reference on their entry. Only one entry per person each month.
2. Entries must be sent either by post, each one on a separate postcard, or by e-mail and be received at the British Birds Editorial Office (Monthly Marathon, British Birds Editorial Office, The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY; e-mail: editor@britishbirds.co.uk) by the stated closing date. Every care will be taken, but, even if negligence is involved, no responsibility can be accepted for non-delivery, non-receipt or accidental loss of entries.
3. All *BB* subscribers are eligible, except members of the Editorial Board and staff of *British Birds*, Directors and members of staff of SUNBIRD/WINGS Holidays, and Directors and members of staff of our printers. (Members of the *BB* Notes Panel, the Rarities Committee, and other voluntary contributors – including bird-photographers, even if one of their photographs is used in the competition – are eligible unless proscribed above.)
4. To win, a *British Birds* subscriber must correctly identify the species shown in ten consecutive photographs included in this competition. The Monthly Marathon will continue until the prize has been won.
5. In the event of two or more *BB* subscribers achieving the ten-in-a-row simultaneously, the competition will continue each month until one of them (or someone else!) achieves a longer run of correct entries than any other contestant.
6. In the event of any dispute, including controversy over the identity of any of the birds in the photographs, the decision of the Editor of *British Birds* is final and binding on all parties.
7. No correspondence can be entered into concerning this competition.
8. The name and address of the winner will be announced in *British Birds*.
9. The prize for the next winner of Monthly Marathon will be £1,500 towards the SUNBIRD holiday of their choice.

whereas they should appear spotted with white in Spotted Crake, regardless of age. Though not well lit, the tertials also appear uniform and unmarked, whereas these feathers in Spotted Crake should show narrow white bars. We are forced to conclude, therefore, that our bird, if it is indeed a crake, ought to be a species that does not occur regularly within our boundaries. Looking further afield for the solution to our puzzle, we must consider those species that are vagrants to the Western Palearctic. Vagrant crakes are comparatively few of course, and the one that most readily springs to mind is Sora *P. carolina*. All of the features visible in the photograph fit this species well, and the apparent grey sides to the breast would indicate that it is an adult.

David Fisher

Following two of the more difficult photographs in the series, it seems that this was a more straightforward challenge: 74% of entrants named the bird correctly as a Sora, this bird being photographed at Porth Hellick, St Mary's, Scilly, in October 1991 by Colin Bradshaw. The majority of those who got it wrong voted for Baillon's Crake. The leader board now shows three people well clear of the rest of the field: Nils van Duivendijk and Diederik Kok now have a sequence



26. 'Monthly Marathon'. Photo no. 204. Twentieth stage in twelfth 'Marathon' or second stage in thirteenth. Identify the species. Read the rules (see page 54), then send in your answer on a postcard to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, or by e-mail to editor@britishbirds.co.uk, to arrive by 29th February 2004.

of ten correct answers, while Lou Cross remains two adrift of the top. Ten correct answers in a row is, of course, enough to win the competition; but only if you are alone in that position! Consequently, this round of the Marathon will continue until one of the top two makes a mistake, or indeed both of them, which will then leave Lou Cross in pole position, assuming that he continues his run. Bear in mind that, if there is a winner of

the competition next month, plate 26 will be the second picture in a new round of the Marathon.

Eds

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Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers mid November to mid December 2003.

Lesser Scaup *Aythya affinis* Inch Lake (Co. Donegal), 6th December. **King Eider** *Somateria spectabilis* Unst (Shetland), 10th December; Leven (Fife), 13th-14th December.

White-billed Diver *Gavia adamsii* One past Cley,

Salthouse and Weybourne (Norfolk), 16th November; South Nesting (Shetland), 17th-18th November. **Pied-billed Grebe** *Podilymbus podiceps* Tacumshin (Co. Wexford), 24th November.

Gyr Falcon *Falco rusticolus*, Inch Lake, 6th December. **American Coot** *Fulica americana* Loch of Clickimin (Shetland), 30th November to 13th December.

Hugh Harrop



27. American Coot *Fulica americana*, Loch of Clickimin, Shetland, December 2003.

American Golden Plover *Pluvialis dominica* In addition to those mentioned in the last report, one on Benbecula (Western Isles), 10th November. **Lesser Yellowlegs** *Tringa flavipes* Smerwick Harbour (Co. Kerry), late November; Newgate Marsh (Pembrokeshire), 5th-7th December; Hayle Estuary (Cornwall), long-stayer to at least 14th December. **Forster's Tern**

Sterna forsteri Nimmo's Pier (Co. Galway), 26th November.

Oriental Turtle Dove *Streptopelia orientalis* Ham/Rattar Mains (Highland), 6th-8th December. **Olive-backed Pipit** *Anthus hodgsoni* In addition to those mentioned in the last report, one at Spurn (East Yorkshire), 9th-10th November. **Red-throated Pipit** *Anthus cervinus* Tacumshin, one present throughout November and into early December; East Runton (Norfolk), 21st November. **Waxwing** *Bombycilla garrulus* The influx mentioned in the last report continued, but with the largest flocks confined to Scotland and northeast England, including 120 in Dundee (Angus) on 12th November; 300 in Kirkcaldy (Fife) on 14th November; 300 in Edinburgh (Lothian) on 14th November; 250 in Jarrow (Co. Durham) on 21st November, with 300 there on 22nd-23rd November; 145 in Hemlington (Cleveland) on 24th November; 220 in Billingham (Cleveland) on 27th November; and 151 in Blaydon (Co. Durham) on 6th December. The largest flock in southern Britain was of 60 at Shottisham (Suffolk) on 6th December.

Jack Levene



28. First-winter Oriental Turtle Dove *Streptopelia orientalis*, Rattar Mains, Highland, December 2003.



Rebecca Nason

29. Desert Wheatear *Oenanthe deserti*, Reculver, Kent, December 2003.

Pied Wheatear *Oenanthe pleschanka* In addition to those mentioned in the last report, one on North Ronaldsay (Orkney), 17th-26th November. **Desert Wheatear** *Oenanthe deserti* Climping (West Sussex), 9th-10th November; Blakeney Point (Norfolk), 9th-10th November; Burnham Overy Staithe (Norfolk), 9th-10th November; Kilminning (Fife), 10th-15th November; Hodbarrow (Cumbria), 11th November; Girdleness (Northeast Scotland), 12th-15th November; Skokholm (Pembrokeshire), 13th November; Gulberwick (Shetland), 14th November; Dungeness (Kent), 16th November; Reculver (Kent), 28th November to 5th December. **American Robin** *Turdus migratorius* Bardsey (Gwynedd), 11th-12th November; Godrevy (Cornwall), 14th-15th December.

Asian Desert Warbler *Sylvia nana* Sandwich Bay (Kent), 20th November. **Hume's Warbler** *Phylloscopus humei* In addition to those mentioned in the last report, the following were seen: Flamborough (East Yorkshire), 10th-15th November; Druridge Pools (Northumberland), 11th November; Low Hauxley (Northumberland), 11th-12th November; Denburn Wood (Fife), 11th November; Fair Isle (Shetland), 13th-14th

and 17th-22nd November; Bressay (Shetland), 13th-23rd November; Portland (Dorset), 21st-22nd November; Great Yarmouth (Norfolk), 30th November to 4th December; Caernarvon (Gwynedd), 14th-15th December; Berrow (Somerset), 14th-15th December. **Dusky Warbler** *Phylloscopus fuscatus* In addition to those reported last month, the following were seen: St Mary's (Scilly), 9th-30th, with two on 16th-23rd November at least; between Land's End and Sennen (Cornwall), 9th-16th November; Portland, 9th-10th November; Caister (Norfolk), 9th-10th November; Sidestrand (Norfolk), 9th November; Warham Greens (Norfolk), 9th-11th November; South Ronaldsay (Orkney), 9th-15th November; Porth Clais (Pembrokeshire), 10th-12th November; Pegwell Bay (Kent), 11th-12th November; Lessingham (Norfolk), 11th November; Wells Woods (Norfolk), 11th November; Clennon Valley (Devon), 21st November to 14th December.

Penduline Tit *Remiz pendulinus* Dungeness, 10th November. **Arctic Redpoll** *Carduelis hornemanni* Landguard (Suffolk), 8th November. **Snow Bunting** *Plectrophenax nivalis* Good numbers,

Recent reports

mainly along the east coast of England from mid November onwards, including 100 Holkham Gap (Norfolk), 175 Blakeney Point, 69 Sandwich Bay, 130 Cley/Salthouse, 87 Flam-

borough, and 250 Donna Nook (Lincolnshire); also 150 Butt of Lewis (Western Isles): **Baltimore Oriole** *Icterus galbula* Oxford (Oxfordshire), 14th-15th December.

Hugh Harrop



30. Hume's Warbler *Phylloscopus humei*, Bressay, Shetland, November 2003.

Jack Levene



31. Little Bunting *Emberiza pusilla*, Walsey Hills, Norfolk, November 2003.

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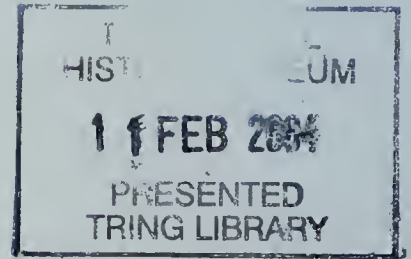
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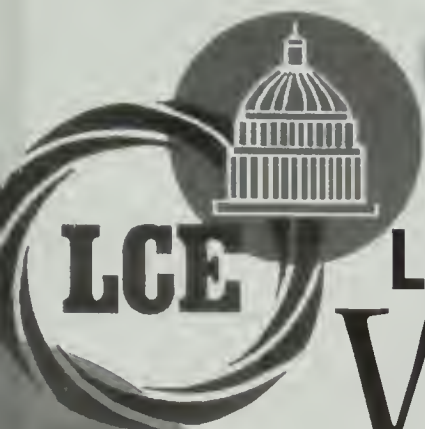
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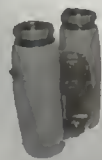
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


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The taxonomic status of Macqueen's Bustard

George Sangster, Martin Collinson,
Andreas J. Helbig, Alan G. Knox
and David T. Parkin



32. Macqueen's Bustard *Chlamydotis macqueenii*, Mangyshlak, western Kazakhstan, May 1996. An incubating female in *Artemisia* (wormwood) steppe, fairly typical breeding habitat of this species in Kazakhstan.

Simon Aspinall

ABSTRACT For much of the twentieth century, Macqueen's Bustard *Chlamydotis macqueenii* was treated as a subspecies of Houbara Bustard *Chlamydotis undulata*, but recent studies of courtship behaviour, vocalisations, and mitochondrial and nuclear DNA have shown consistent differences between Macqueen's and Houbara Bustard. Together with clear-cut plumage differences, these new data suggest that Macqueen's and Houbara Bustard are best treated as separate species. The Canary Islands population of Houbara (*C. u. fuertaventurae*) is not safely diagnosable from populations in Northern Africa (*C. u. undulata*) at present, and, based on current knowledge, these populations are best treated as a single species.

The 'Houbara Bustard *Chlamydotis undulata*' is widespread across arid, semi-desert regions of the Palearctic, from the Atlantic coast of Africa (including three of the Canary Islands) to Mongolia. This distribution is fragmented, however, and consists of a series of more-or-less isolated populations (fig. 1; see also Cramp & Simmons 1980). Conventional wisdom has regarded this as a polytypic species, comprising three subspecies: *C. u. macqueenii* (hereafter *macqueenii*) in eastern Egypt (Sinai), Arabia and central Asia from northwest Kazakhstan east to Mongolia, wintering from the Persian Gulf to northwest India and in central China; *C. u. undulata* (hereafter *undulata*) in northern Africa from Mauritania to western Egypt; and *C. u. fuertaventurae* (hereafter *fuertaventurae*) on Fuertaventura, Lanzarote and Graciosa, in the Canary Islands. At present, there is no contact at all among the populations: they are entirely allopatric. Indeed, we know of no evidence that *macqueenii*, *fuertaventurae* and *undulata* have ever been sympatric (i.e. with populations overlapping), or even parapatric (i.e. with populations coming into contact, but not coexisting), although it has

been suggested that *macqueenii* and *undulata* may have been in contact in the recent past (Gaucher *et al.* 1996).

This conventional treatment of the 'Houbara' group is based on the Polytypic Species Concept, which generally regards closely related, non-overlapping taxa as subspecies of a polytypic species; this classification was assumed to be consistent with the Biological Species Concept. Recent research has, however, cast new light upon the courtship, vocalisations and genetic variation of the Houbara taxa. This research, combined with revised views of species limits (e.g. Helbig *et al.* 2002), suggests that the traditional interpretation may no longer be tenable. This paper summarises the evidence for taxonomic differentiation in this complex, extending the review by Sangster (1996).

Recent research findings

Plumage and courtship

Bustards of the Houbara group are gregarious outside the breeding season, but solitary and territorial when breeding (Cramp & Simmons 1980). Courtship display is by the male and is

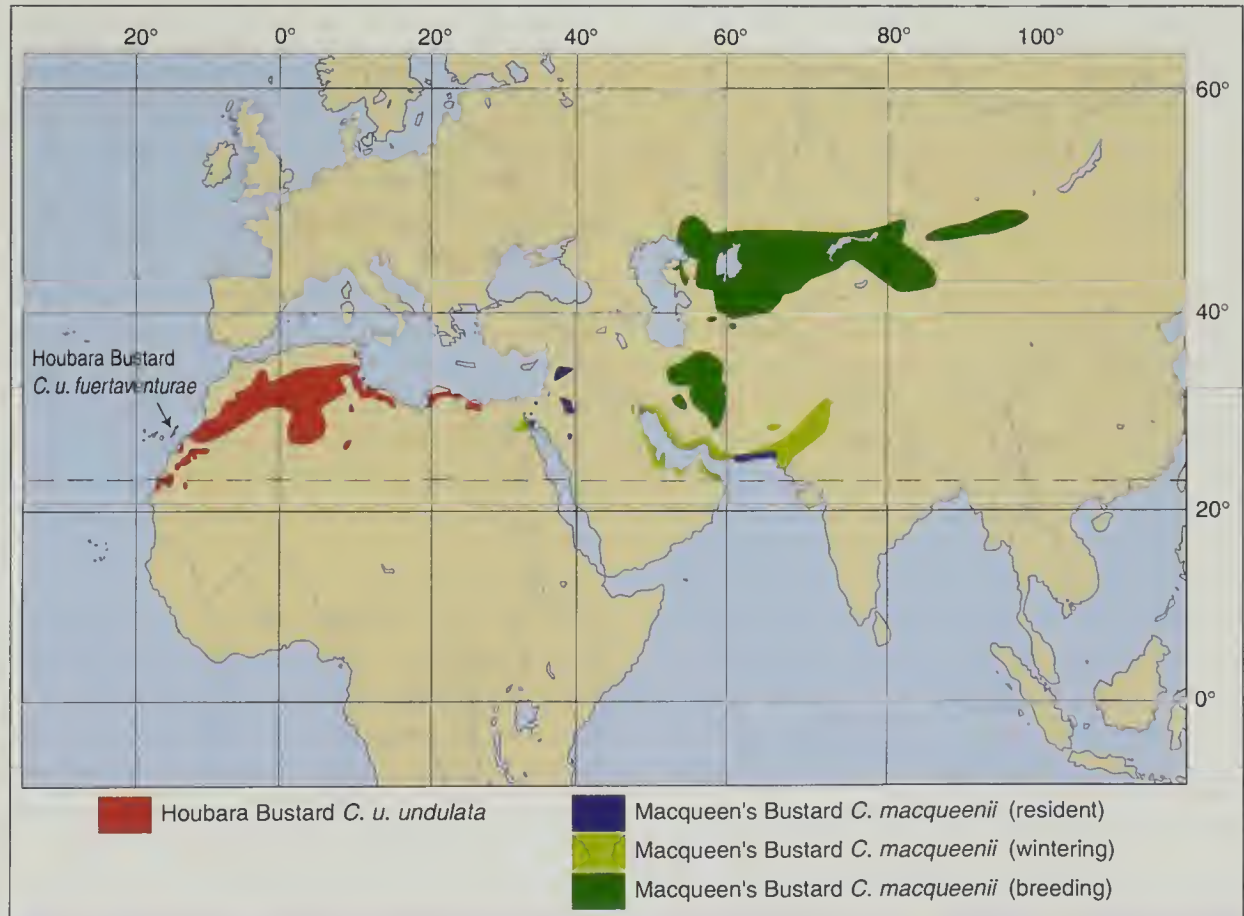


Fig. 1. Map showing world distribution of the three taxa in the Houbara complex: Houbara Bustard *Chlamydotis undulata* of the nominate race and the Canary Islands form *fuertaventurae*, and Macqueen's Bustard *C. macqueenii*.

Table 1. Acoustic characters of display calls of Houbara Bustard *Chlamydotis undulata* and Macqueen's Bustard *C. macqueenii* (from Gaucher *et al.* 1996, modified where appropriate).

Vocal parameter	<i>undulata</i>	<i>macqueenii</i>
Duration of the phrase or series	5.4-9 s*	12-18 s**
Number of notes per series	3-5***	25-40
Variation of melodic structure during a series	No	Yes
Variation of intensity during a series	No	Yes
Variation of rhythm during a series	No	Yes
Average length of a note including intermediate silence	2.25 s	0.43 s
Length of the note	0.45 s	0.24-0.33 s
Length of intermediate silence	1.8 s	0.18-0.09 s
Silence/note ratio	4	0.5
Frequency variation during the note	No	Decreasing
Number of vibrations during the note	42-45	21-25

* Gaucher *et al.* (1996) stated that the phrase lasts 9 seconds, but a published recording (Chappuis 2000) includes a three-note phrase lasting 5.4 seconds.
** Table 1 in Gaucher *et al.* (1996) shows a range of 12-13 seconds, but this is probably a typographic error because a range of 12-18 seconds was given in their main text, which is consistent with a published recording (Chappuis 2000).
*** Gaucher *et al.* (1996) stated that there are four notes, but two phrases in a published recording (Chappuis 2000) show only three notes, and a sonogram illustrating a five-note phrase was presented in Gaucher *et al.* (1996, fig. 7).

curtailed after pair-formation, which suggests that its role is predominantly to attract a female. Key components of the display include the feathers on the neck and head becoming erect and the adoption of postures which make the male highly conspicuous. Gaucher *et al.* (1996) studied the behaviour and vocalisations of *macqueenii* and *undulata*, both in the field and in captivity, and reported differences in certain visual aspects of the courtship display. The filamentous feathers on the sides of the neck are black in *undulata*, but black-and-white in *macqueenii*. Furthermore, the crest of *undulata* is white and remains erect during display, while that of *macqueenii* is black-and-white and falls over the bill. These differences in the colour of the feathers and the position in which they are held during display (see drawings in Gaucher *et al.* 1996, and colour photos in Sangster 1996) seem to be diagnostic. During the running phase of the display, *undulata* runs almost as fast as *macqueenii*, but the neck is reported to swing with a greater amplitude in *macqueenii* than in *undulata* (although quantitative data were not given by Gaucher *et al.*). In *fuertaventurae*, the frills on the sides of the neck are black (and thus similar to those of *undulata*). Gaucher *et al.* did not study the courtship behaviour of *fuertaventurae*, but descriptions in an earlier study by Hinz & Heiss (1989) indicate that it is closely similar to that of *undulata*.

Vocalisations

If no potential partner is close to the displaying male, he begins to call. Although audible to observers up to 50 m away, this part of the display was apparently unreported until Alekseev (1985) recorded it in *macqueenii*. Gaucher *et al.* (1996) reported that calls during display of *undulata* and *macqueenii* differ in no less than 11 vocal parameters (table 1, fig. 2). For example, *undulata* typically utters a series of four notes, which together last nine seconds, whereas *macqueenii* typically gives a series of 25-40 motifs and notes, lasting 12-18 seconds. During a series, the notes of *macqueenii* show variation in melodic structure, intensity and rhythm, whereas no such variation has been reported in *undulata*. The display calls of *fuertaventurae* were not studied by Gaucher *et al.* (1996) and have not been analysed in detail.

Variation in enzymes

The variation within and between populations or higher taxa can be analysed by screening genetically variable enzyme loci. A comparison of the gene (allele) frequencies of different enzymes allows an estimate to be made of the amount of differentiation between two populations. Granjon *et al.* (1994) carried out such a comparison by applying Nei's coefficient of genetic distance to 31 enzyme genes of *macqueenii* from Pakistan (n=22) and *undulata* from Algeria (n=17); they concluded that there is a 'high

genetic identity... between the two subspecies'. Further details are presented in Appendix 1.

Mitochondrial-DNA sequences

Gaucher *et al.* (1996) sequenced 300 base pairs of the mitochondrial-DNA (mtDNA) genome from individuals of *macqueenii* from Pakistan, Saudi Arabia and Sinai, and *undulata* from Algeria. DNA sequences can be analysed using a technique called 'neighbour-joining', which uses

their similarity to group taxa into clusters that are considered to reflect their evolutionary history. Phylogenetic analysis of the Houbara Bustard sequences showed that eastern birds clustered together into a *macqueenii* group, clearly separate from western birds, which clustered together into an *undulata* group. The distinctness of these groups indicated that each has a separate common ancestor, thus supporting the division of the two based on morphology.

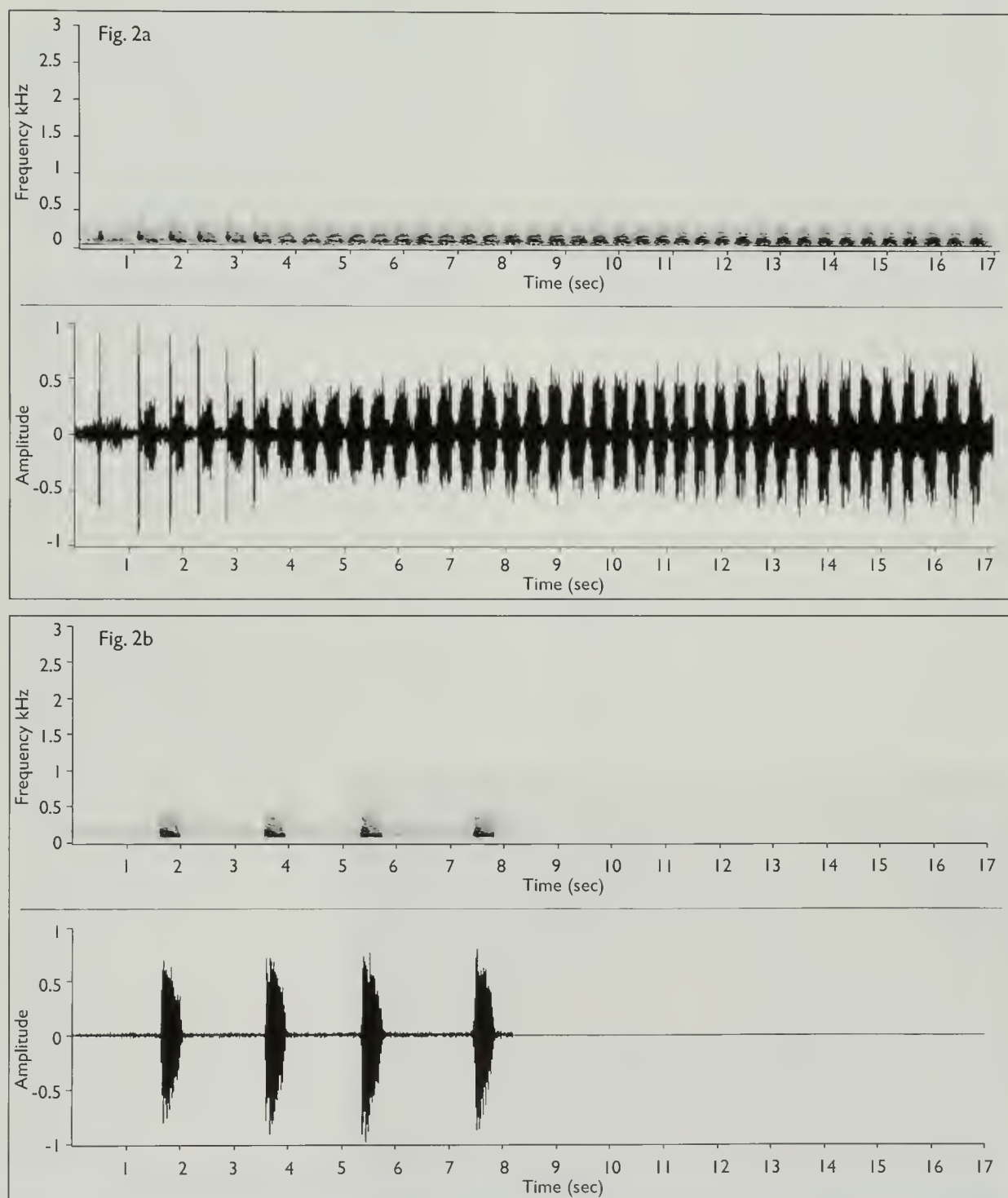


Fig. 2. Sonograms (above) and oscillograms (below) of a complete phrase of the display call of captive male Macqueen's Bustard *Chlamydotis macqueenii* (2a) and Houbara Bustard *C. undulata* (2b). Recordings were taken from Chappuis (2000); sonograms were made using Syrinx (Burt 2001).

The work indicated that the *undulata* and *macqueenii* clusters comprise separate evolutionary lineages. No differences were found between the mtDNA sequences of *undulata* and *fuertaventurae*. Broders *et al.* (2003) extended the study of Gaucher *et al.* (1996) and confirmed that there are consistent differences between *undulata*/*fuertaventurae* and *macqueenii*.

Pitra *et al.* (2002) analysed the mtDNA of more than 20 species of bustards, including all three forms traditionally lumped under Houbara; they confirmed that *undulata* and *fuertaventurae* are sister taxa, but that *macqueenii* is more divergent. They suggested that *undulata*/*fuertaventurae* differ from *macqueenii* by about as much as, for example, Buff-crested *Lophotis gindiana* and Savile's Bustards *L. savilei* or Australian *Ardeotis australis* and Great Indian Bustards *A. nigriceps* differ from each other. Idaghdour *et al.* (2004) recently published the results of another molecular study of the Houbara group. They sequenced 854 base pairs of the mitochondrial control region from 73 individuals of all three taxa. Again, their results confirm that *fuertaventurae* and *undulata* are weakly differentiated, but that these taxa are clearly distinct from *macqueenii*. Further details are presented in Appendix 2.

Nuclear and mitochondrial-DNA analyses

In an attempt to test whether the subpopulations of *macqueenii* are genetically distinct, D'Aloia (2001) carried out analyses of mtDNA of *macqueenii* from China, Pakistan, Afghanistan, eastern and western Kazakhstan, Iran, Oman, Abu Dhabi, Saudi Arabia and

Sinai, and *undulata* from Algeria, using well-established methodologies. In summary, the results showed consistent differences between *undulata* and *macqueenii*, with the two taxa forming separate monophyletic clusters, thus supporting the results of Gaucher *et al.* (1996), Pitra *et al.* (2002) and Broders *et al.* (2003). Further details are presented in Appendix 3.

Discussion

Diagnosability

In an attempt to bring a degree of consistency to its deliberations, the BOU Taxonomic Subcommittee drew up a set of 'Guidelines' to help in defining species limits (Helbig *et al.* 2002). Key to these deliberations are (1) whether or not the taxa are diagnosably distinct, and (2) whether they represent independent evolutionary units (lineages, following de Queiroz 1999).

Macqueenii and *undulata* evidently possess different morphological, behavioural and vocal characteristics which are diagnostic, and molecular analyses of mitochondrial and nuclear DNA show that they form two clearly distinct (monophyletic) units (or clades). Although the molecular differences are small, they are within the range considered acceptable for separating closely related non-passerine species (e.g. Avise & Zink 1988, Shields 1988, Seibold *et al.* 1996).

The evidence that the populations of Houbara Bustard on the Canary Islands are diagnosably distinct is not conclusive. Currently, *fuertaventurae* is recognised on the basis of minor quantitative differences from *undulata*, such as its smaller size and darker

plumage. These differences may be the result of ecological factors. Although sample sizes are small, mtDNA sequences of the North African and Canary Islands populations appear to be identical (Gaucher *et al.* 1996; Broders *et al.* 2003), which can be explained either by recent colonisation of the Canary Islands from North Africa, or by recent or continuing gene flow between the two regions (Gaucher *et al.* 1996).

The differences in behaviour and morphology between *macqueenii* and *undulata*, and



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33. Houbara Bustard *Chlamydotis undulata*, of the Canary Islands population *C. u. fuertaventurae*, Lanzarote, February 2000.

their molecular separation into two distinct groups, indicate that these are separate evolutionary lineages. The lack of published evidence for diagnostic differences within either *undulata* or *macqueenii* suggests that, at present, no other populations in the complex qualify as distinct species following the guidelines of Helbig *et al.* (2002).

Reproductive isolation

Behavioural characters are often superior to morphological characters in the study of the level of reproductive isolation in closely related species (Mayr 1963). The additional evidence reported by Gaucher *et al.* (1996) allows us to re-examine the taxonomic status of Houbara Bustards because courtship is directly involved in pair-formation and often forms a reliable indicator of species recognition in the birds themselves. Although there are no data to indicate whether female *undulata* would respond to the display of male *macqueenii*, and vice versa, the evidence that the pair-formation mechanisms of these taxa differ in several ways supports their treatment as separate species. Only experimental tests of mate choice in *Chlamydotis* bustards can confirm whether the behavioural differences indeed prevent the formation of mixed pairs.

Taxonomy

The three subspecies of 'Houbara Bustard' are allopatric, and, following the guidelines of Helbig *et al.* (2002), closely related allopatric taxa should be regarded as separate species only if they are fully diagnosable in each of several discrete or continuously varying characters related to different functional contexts (Helbig *et al.*'s condition 4.1). It is now established that *macqueenii* and *undulata* possess different and fully diagnosable morphological, behavioural, vocal and molecular characters. There is, however, no evidence to suggest that *fuertaventurae* is diagnosably distinct from *undulata*. Based on these considerations and the available evidence, we recommend that the Houbara complex be treated as two species: Houbara Bustard *Chlamydotis undulata* (with the subspecies *undulata* and *fuertaventurae*) and Macqueen's Bustard *C. macqueenii* (monotypic).

Although the guidelines of Helbig *et al.* (2002) are consistent with the Evolutionary Species Concept (Mayden 1997) and the General Lineage Concept (de Queiroz 1999),

the conclusion that *undulata* and *macqueenii* are best treated as species also follows if the taxonomic criteria of other species concepts are applied. For instance, because they represent populations which are clearly diagnosable in several morphological, behavioural, vocal and molecular characters, they qualify as species under the Phylogenetic Species Concept (Cracraft 1983). Because *undulata* and *macqueenii* form separate, monophyletic groups of populations and are diagnosable by several characters, they would be treated as species under a different version of the Phylogenetic Species Concept (Mishler & Theriot 2000), a version perhaps more appropriately known as the 'Monophyletic Species Concept' (Davis 1997; Hull 1997). Under the Recognition Species Concept (Paterson 1985), *undulata* and *macqueenii* would probably be treated as different species because their pair-formation mechanisms differ. Based on these differences in pair-formation mechanisms, a case can be made that *undulata* and *macqueenii* are reproductively isolated and that they probably qualify as species under the Biological Species Concept (Mayr 1970). Consequently, we believe that the treatment of *undulata* and *macqueenii* as species does not depend critically on the choice of species concept.

Acknowledgments

We thank an anonymous referee whose comments on an earlier draft have improved this paper.

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Appendix I

Variation in enzymes

Nei's coefficient of genetic distance has been used previously to compare the gene (allele) frequencies of different enzymes among a range of avian groups (see Barrowclough 1980). Granjon *et al.* (1994) applied this technology to 31 enzyme genes of *macqueenii* from Pakistan (n=22) and *undulata* from Algeria (n=17). Thirteen of these loci were genetically variable (polymorphic). No diagnostic alleles were found, i.e. at no enzyme locus was one form found exclusively in *macqueenii* and another in *undulata*. Three 'private' alleles were, however, found in each, two at quite high frequency

(>5%). Private alleles are examples of genetic variants which are present in one population or taxon and absent from another. They are regarded as evidence for the absence of gene flow between the populations, since coexistence usually results in alleles being passed between individuals by sexual reproduction. The genetic distance between *macqueenii* and *undulata*, measured by Nei's coefficient, was 0.008, and led Granjon *et al.* (1994) to conclude that there is a 'high genetic identity... between the two subspecies'. A genetic distance of 0.008 is at the lower end of values for taxa known on other grounds to be separate species (Barrowclough 1980).

Appendix 2

Mitochondrial-DNA sequences

Gaucher *et al.* (1996) sequenced 300 base pairs of the mtDNA genome from individuals of *macqueenii* from Pakistan, Saudi Arabia and Sinai, and *undulata* from Algeria. An analysis using the 'neighbour-joining' technique suggested that the *macqueenii* clade and the *undulata* clade comprise separate evolutionary lineages, and that the genetic distance between the two was 0.7-1.1%. No differences were found between the mtDNA sequences of *undulata* and *fuertaventurae*.

Broders *et al.* (2003) extended the study of Gaucher *et al.* (1996) and confirmed that there are consistent differences between *undulata/fuertaventurae* and *macqueenii*. They sequenced 1,143 base pairs of the mitochondrial cytochrome *b* gene. In addition to the localities sampled by Gaucher *et al.*, this study also included samples of *macqueenii* from Kazakhstan. Their results show that mtDNA sequences of *undulata* and *macqueenii* differ by 1.7-1.9%, whereas those of *undulata* and *fuertaventurae* are identical. Individuals of *macqueenii* from Sinai, Egypt, formed a separate cluster in these mtDNA sequence studies, but this was based on differences in a single base pair (Gaucher *et al.* 1996) or three base pairs

(Broders *et al.* 2003).

Pitra *et al.* (2002) examined two separate genes from the mitochondrial genome, plus a nuclear sequence, but only the mitochondrial cytochrome *b* gene (444 base pairs) was screened in these three taxa. Although their primary objective was to resolve the evolutionary history of the whole bustard family, and to establish the authenticity of the various genera within the bustards, they confirmed that *undulata* and *fuertaventurae* are sister taxa, and that *macqueenii* is more divergent.

Appendix 3

Nuclear and mitochondrial-DNA analyses

D'Aloia (2001) carried out RAPD (Randomly Amplified Polymorphic DNA; Hillis *et al.* 1996) analyses of nuclear DNA, and SSCP (Single Stranded Conformational Polymorphism; Hillis *et al.* 1996) analyses of mtDNA of *macqueenii* from China, Pakistan, Afghanistan, eastern Kazakhstan, western Kazakhstan, Iran, Oman, Abu Dhabi, Saudi Arabia and Sinai, and *undulata* from Algeria. These analyses were directed towards different molecular sequences from those in the previous studies and, even though they all involve molecular data, they can be regarded as independent lines of evidence.

The RAPD data supported the results of Gaucher *et al.* (1996), Pitra *et al.* (2002) and Broders *et al.* (2003) in showing consistent differences between *undulata* and *macqueenii*, with the two taxa forming separate monophyletic clusters. The RAPD analysis revealed several polymorphisms in the *macqueenii* samples but none was specific to any geographic population.

The SSCP analyses gave similar results. All *undulata* were of one type and all *macqueenii* were of another type. There was no variation within *macqueenii*: no differences were found between birds from the Sinai population and those from other Arabian or Asian populations. Although the sample sizes are small, the SSCP data show that there are consistent differences between the two taxa.



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34 Houbara Bustard *Chlamydotis undulata*, of the Canary Islands population *C. u. fuertaventurae*, Fuerteventura, December 2002.

From the Rarities Committee's files:

The Macqueen's Bustard in Suffolk in 1962

Gerald J. Jobson and Brian J. Small

ABSTRACT The record of a 'Houbara Bustard *Chlamydotis undulata*' in Suffolk, in November/December 1962 (the only record in Britain in modern times), is discussed, and the reasons for its subsequent identification as a Macqueen's Bustard *C. macqueenii* are explained. Following a study of museum specimens, a detailed comparison of the key morphological differences among the three taxa of the 'Houbara complex' is presented.



In 1964, the late H. E. Axell wrote an account of the occurrence of the 'Houbara Bustard *Chlamydotis undulata*' in Suffolk, present from 21st November to 29th December 1962, and concluded that some of the features of the bird's appearance were contradictory and precluded identification to subspecies level (Axell 1964). In the early 1960s, subspecific identification of 'Houbara Bustard' was, not unreasonably, regarded as less critical than it is today. Not long after the 'Suffolk Houbara', however, Stead (1965) discussed the identification of the European bustards and concluded that the Suffolk bird belonged to the Asian form *macqueenii*.

Until recently, there the record stood, with no formal submission (as *macqueenii*) to BBRC and, therefore, no declaration by BOURC on its (sub-)specific identity. But, spurred on by the decision to separate the three forms of Houbara Bustard into two species, Houbara Bustard *C. undulata* and Macqueen's Bustard *C. macqueenii* (Ibis 144: 707-710; Sangster *et al.* 2004), BBRC re-examined the record and has now accepted it as Macqueen's Bustard *C. macqueenii*. Macqueen's Bustard has recently been

admitted onto the British List after the acceptance of an individual collected at Kirton in Lindsey, Lincolnshire, on 7th October 1847 (BOURC 2004).

The paper from the BOURC's Taxonomic Sub-committee (Sangster *et al.* 2004) concentrates on display, behavioural and genetic features of Houbara and Macqueen's Bustards, but this paper outlines those features used to assess this particular record, and which enabled its identification as Macqueen's Bustard. We also describe the circumstances of the Suffolk record, from an era in British birding which now seems so distant from the manic birding scene of today. Some additional features of Macqueen's Bustard, in relation to Houbara of both subspecies, *undulata* and *fuertaventurae*, are also reported.

The Suffolk Houbara

Bert Axell's note in *British Birds* (Axell 1964) described some of the circumstances of how this bird was discovered. The following account is compiled from GJJ's own notebook.

On 25th November 1962, GJJ had been

ringing with A. D. Rowe at Dingle Hills near Walberswick, when they were joined by Mr and Mrs F. K. Cobb, who informed them that a local gamekeeper, P. Muttitt, had reported a bustard feeding in a mustard field at Hinton, north of Westleton. They arrived to find an empty mustard crop, but on the opposite side of the road a stubble field looked hopeful, and, with the permission of the gamekeeper, they spread out to search it. From the centre of the stubble, a large bustard sprang from the feet of F. K. Cobb and flew off with strong, measured and deliberate wing-beats, the striking black-and-white wing pattern being the most conspicuous feature. Further observation showed it to be basically sandy in colour with dark spots on the mantle, dark bars across the tail and, in flight, white across the wing-coverts and a large white patch on the primaries. After a short discussion, the assembled group, including GJJ, identified it as a Houbara Bustard.

For the next five weeks, it fed in the mustard crop, sometimes crossing the road to and from the stubble field. At times, its reluctance to take flight caused it to crouch until any danger had passed, or to walk from the field rather than fly. It was also quite shy, and on one occasion it reacted to a cyclist by crouching low and withdrawing its head and neck into its shoulders, becoming remarkably inconspicuous for such a large bird. GJJ observed it eat an earthworm on one occasion and once, when mobbed by a Carrion Crow *Corvus corone*, it was seen to extend its head and neck upwards in a fashion resembling a Eurasian Bittern *Botaurus stellaris*

and snapped its bill repeatedly.

Many other people saw the bustard during its stay, including H. E. Axell of course, and it became a popular attraction, with as many as a dozen cars parked along the road at one time. By the end of December, a great Arctic freeze had begun, which was to last for ten weeks: the beginning of the dreadful winter of 1962/63, which almost wiped out the British population of Dartford Warblers *Sylvia undata*. Heavy snow fell, covering the mustard crop and surrounding area completely, and the last sighting of the bustard was on 29th December 1962.

Description

Axell (1964) described the 'Suffolk Houbara' as follows:

'*Head and neck:* forehead sandy; crown nearly white in centre and bordered with black feathers which only just protruded beyond the curve of the head, also a few black feathers at rear of crown; above and below eye, lores, chin and throat all pale grey; back of neck pale grey, becoming almost white near base, and front of neck sandy-grey; black ruff down side of neck, beginning at rear lower edge of ear-coverts, with thin line of white in front of the middle half. The crest of black feathers was not seen raised. The black ruff down the side of the neck was more apparent from behind, except when the bird erected it in display; the long loose feathers at the base lay partly behind a Bittern-like 'sporrán' of pale brown feathers just above the upper breast. The thin white line in front of



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35. Macqueen's Bustard *Chlamydotis macqueenii*, Hinton, Suffolk, November/December 1962.

the black was visible only at close quarters; I did not see, nor did any other observer record, any prominent area of white in the tuft when it was displayed.

'Rest of body: mantle and scapulars pale sandy with regularly spaced slaty blotches; lower back and rump not well seen but appeared as paler area between mantle and upper tail-coverts; breast off-white; flanks and under tail-coverts whitish. The breast and part of the belly were stained with mud and frequently wet.

'Wings: coverts and inner secondaries as mantle and scapulars but less boldly marked with dark blotches; primaries and secondaries largely hidden when wings closed. In flight, the distal thirds of the outer primaries were black, while the middle parts of these feathers produced a large and prominent white patch, [which was] separated by a thin area of black from a smaller whitish patch near the bend of the wing; the inner primaries were black and the outer secondaries rather less dark, and these formed a band of blackish narrowing inwards across the outer two-thirds of the wing; whitish tips to the inner primaries and secondaries made a thin pale line along the trailing edge of the wing. The startlingly black-and-white wings opening from the sandy body as the bird took flight was reminis-

cent of a Stone Curlew *Burhinus oedicnemus*.

'Tail: pale chestnut above (darker than mantle) with widely spaced bars of dark grey and white feather-tips. The tail was very stained. The white tips were usually visible only when it was fanned during preening. At such times it could be seen that there were three full bars of dark grey widely spaced from near the tip and an apparent half-bar in the middle of the tail; this half-bar was otherwise generally hidden by the folded primaries.

'Soft parts: bill dark horn, shorter than head and not deep; iris large, bright and pale yellow; legs pale straw.'

Axell concluded that subspecific identification of the Suffolk bird was not possible. The following year, however, Stead (1965) observed that: 'Having examined the large series of skins of all three subspecies of the Houbara in the British Museum (Natural History) only a week after seeing the Suffolk bird, I must beg to differ with Axell's view, as I am quite certain that this individual belonged to the Asiatic form, *macqueenii*.' Stead provided three good reasons for his diagnosis: the 'broader and coarser bands of black on the mantle of *undulata* give it an altogether darker appearance'; 'the long feathers on the fore-neck, which are grey in *macqueenii* and white in *undulata*'; and 'the black feathers on the crown of *macqueenii*, which are absent on *undulata*'.

Museum diagnosis

Following a study of specimens at the British Museum (Natural History), Tring, we discovered features of interest which had not been noted by Stead (1965) or mentioned in the original description (Axell 1964). Clear and obvious morphological differences between all three forms were found (see table 1).

Identification

Finally, and to summarise, the identification of the bustard in Suffolk as Macqueen's can be confirmed by a number of key features visible in the photographs and apparent from the description. The file has recently been



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36. Macqueen's Bustard *Chlamydotis macqueenii*, Hinton, Suffolk, November/December 1962.

Table 1. Morphological differences among the three forms of 'Houbara' found in the Western Palearctic: Houbara Bustard *Chlamydotis undulata* of the nominate form *undulata* and the Canary Islands' form *fuertaventurae*; and Macqueen's Bustard *C. macqueenii*. Based on a study of specimens at the British Museum (Natural History) by the authors.

	<i>macqueenii</i>	<i>undulata</i>	<i>fuertaventurae</i>
Crown	White in the centre, longer black feathers at rear	All-white central feathers	Obvious dark crown-sides bordering white central crown feathers
Neck-side tufts	Long, fine feathers on the sides of the foreneck (from just below the ear-coverts) have black bases and tips and a white band in the middle; lower neck feathers are also fine, but all-white; rear neck feathers are white – as is extension of crest	Upper foreneck feathers are denser, wider ('fuller' or 'more bushy'); lower feathers are narrower and white, some with black at the tip; thin black feathers on the rear neck	Pattern as <i>undulata</i> , but feathers slightly wider (even 'fuller' than on <i>undulata</i>) – lower feathers all-white and slightly longer than on <i>undulata</i> ; coarser vermiculations on neck-sides
Upperparts (mantle/scapulars)	Pinkish-sandy in colour – strongest on rump, uppertail-coverts and tail; very fine dark vermiculations (probably not visible in field) between obvious, contrasting dark bands across feathers – the band at each feather tip is like a forward-pointing arrowhead	Colour more creamy-sand or buff than on <i>macqueenii</i> ; cross-bands composed of heavy vermiculations and pale areas show sparse dark marks – overall effect being more even and mid-toned	Base colour less buff than on <i>undulata</i> , but overall much darker than on <i>macqueenii</i> and <i>undulata</i> , with strong, broad dark bands on individual feathers forming heavily barred upperparts
Upperwing-coverts*	On closed wing, coverts appear pale, almost silvery-white, with black arrowheads forming spotted effect; greater primary-coverts have a white base and broad black tip; median secondary-coverts have creamy white base, narrow black sub-terminal bar, and white spot at tip; greater secondary-coverts are basically black but have white bases to inner and outer webs	Plainer – no spotting – but fairly heavy vermiculations; greater primary-coverts and median secondary-coverts have rich, warm-buff bases; greater secondary-coverts are basically all black, but a pale base on inner web may be visible	Darker, with strong dark vermiculations forming more concolorous effect with mantle and scapulars; greater primary-coverts and median secondary-coverts also have richly coloured base, but with on average more black; greater secondary-coverts basically all-black
Uppertail	Tail bands are narrow, grey-black – appearing silvery at some angles	Broader, but more diffuse bands, interspersed with slightly heavier vermiculations	Obvious broad dark barring
Breast	Grey	White, but with some breast-side vermiculations	White, but with quite strong, dark, breast-side barring
Rear flanks	Barred with black	Diffuse brownish marks, probably not visible in field	Sparse, narrow barring
Undertail-coverts and vent	Appear finely peppered with dark marks and some bars	Basically white, with some very sparse bars on lateral undertail-coverts	Well-marked, with heavy barring

* It is hard to gauge from specimens what effect the pattern and colour of the upperwing-coverts have in the field, but one might suspect that *macqueenii* shows a paler upperwing panel, with *undulata* and *fuertaventurae* showing darker upperwing-coverts. All three have extensive white bases to the primaries, quite broadly tipped black (with about 200 mm cf black on the outermost primary); but not as broadly as shown by Stead (1965). We suspect that the white at the base of the greater primary-coverts on *macqueenii* is visible in flight.

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37-39. Macqueen's Bustard *Chlamydotis macqueenii*,
Hinton, Suffolk, November/December 1962.

recirculated around the BBRC and the record has been accepted, for the reasons below:

1. The bird had white central crown feathers, but an obvious black tuft at the rear of the crown. This differs significantly from the central crown of *undulata*, which is entirely white.
2. The mantle colour was sandy, a colour which is more characteristic of *macqueenii* and compares with the richer, buff upperparts of *undulata*.

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3. The mantle and scapular feathers were marked with neat and small 'V'-shaped slaty bars or (forward-pointing) chevrons, lacking any other patterning, i.e. no fine vermiculations were visible. The tertials and innermost greater coverts had several neat dark chevrons. The upperwing-coverts were even more minimally 'spotted', with patterning virtually absent on the outer coverts. On *undulata* the markings show as darker bars across the mantle and scapulars, with strong vermiculations between the bars, making it look more evenly coloured above, while *fuertaventurae* is very much more heavily barred and appears darker overall.

4. The tail pattern was typical of *macqueenii* in having only very narrow bars across it; indeed in some of the descriptions the tail is noted as unbarred. On *undulata* the bars are broader with stronger vermiculations between them and *fuertaventurae* has even broader dark bars. At least one of the black-and-white photographs by Eric Hosking shows the narrow tail barring very well.

Another difference, not noted but just visible on at least one of the black-and-white Hosking images, is that the rear flanks and undertail-coverts of *macqueenii* can show neat wavy black lines; on *undulata* these are fine vermiculations.

Acknowledgments

We would like to thank David Hosking for allowing us to use several of the late Eric Hosking's black-and-white photographs.

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The *BB/BTO* Best Bird Book of the Year 2003

British Birds and the British Trust for Ornithology announce the winner of the Award for the title of BEST BIRD BOOK OF THE YEAR.

All books reviewed in *British Birds* or the BTO publications *BTO News* and *Bird Study* during the year 2003 were eligible for consideration for this Award.



As in previous years, each of the six judges was first asked to select a provisional list of six titles, and the resulting group of books (plus a small number of 'honourable mentions') formed our initial short-list. Although the judging for this Award does not follow any formal criteria, we are looking for special merit in books which will, we believe, appeal to the readership of *BB* and *BTO News*. In addition, in selecting these Awards, we hope to encourage good work and high standards by both publishers and authors. Judging was again carried out at the BTO conference at Swanwick, Derbyshire, in December, where all the short-listed books were available for further scrutiny. Eventually, the initial short-list of 18 was whittled down to ten titles, and each judge was asked to rank these ten, so that the final winner and runners-up could be identified.

The judging began this year with a debate about the ethics of including the *Migration Atlas*. In particular, we needed to establish whether we could even consider this title for the

Award, given that the book was produced by the BTO, one of the co-sponsors of this Award, and also that John Marchant, one of the judges, is one of the editors. John was clearly put in an invidious position, and both he and Colin Bibby initially felt that the *Migration Atlas* should not be considered for the main award. The other judges, especially those representing *BB*, and therefore less compromised by the situation, unanimously voted that the *Atlas* should be the winner, and argued that we should choose the best available book based purely on its merits as an ornithological publication. After some time, we agreed that the readers of both *BB* and *BTO News* were best served by this approach, and the *Migration Atlas* was 'let back into the fold'. It quickly became apparent that here was our winner, despite continued abstentions from John and Colin, and all that remained was to decide the other placings, for which we had a wide range of exceptionally worthy candidates.

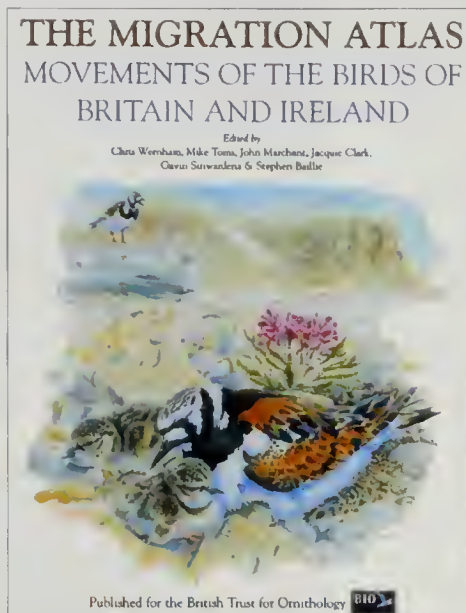
WINNER: The *Migration Atlas*: movements of the birds of Britain and Ireland.

Edited by Chris Wernham, Mike Toms, John Marchant, Jacquie Clark, Gavin Siriwardena and Stephen Baillie. T & A D Poyser, A&C Black, London, 2002 (see Brit. Birds 96: 209).

We agreed that this is quite the most extraordi-

nary compilation of bird data ever seen in a single volume. It is crammed with fascinating details about the travels of birds which spend at least part of their lives in Britain & Ireland. Although this atlas has been a long time coming, we felt it had been well worth the wait, and as an example of a collaborative ornithological project it may be hard to improve on. Far more than a simple accumulation of data, the analyses of dis-

persal patterns and migration systems add significantly to our understanding of bird distribution, as well as of migration routes and timing. It is an impressive benchmark of what we now know, incorporating almost a century of ringing effort, but it looks forward too, and many priorities for future work are identified. It is a monument to the efforts of all the ringers who helped gather the data and to the many authors who wrote individual accounts. By combining information from ring recoveries with that from



other sources, this book demonstrates emphatically and unequivocally the value of ringing, and shows how diverse methods involving bird ringing could help solve many of the mysteries that remain. Finally, it was coincidental, but nonetheless appropriate, that this monumental landmark volume was crowned this year's winner at a conference dedicated to the memory of Chris Mead – one of the Ringing Scheme's most vigorous and inspiring protagonists.

2nd: Birds, Scythes and Combines: a history of birds and agricultural change



By Michael Shrubb. Cambridge University Press, Cambridge, 2003 (see Brit. Birds 96: 659-660).

Mike Shrubb's treatise on the interrelationships between birds and farming does an excellent job of placing the current problems faced by our farmland birds, as a result of changes in agricultural practices, into the context of the development of farming over the past few centuries. Shrubb writes lucidly, and although the book contains a great quantity of detailed information, it is not presented in an overwhelmingly heavy or scientific fashion; he also writes with authority, being a retired farmer with a lifelong enthusiasm for birds.

3rd: Birds and Light: the art of Lars Jonsson

By Lars Jonsson. Christopher Helm/A&C Black, London, 2002 (see Brit. Birds 96: 151).

The artwork in Lars Jonsson's book is breathtaking and exquisite, and is reproduced in a fashion which does full justice to his talent. We recognise that appreciation of art is a personal thing, and that while some may prefer Jonsson, others might find more inspiration in (for example) Bob Bateman's work, whose book *Birds* was also considered in our initial short-list. We felt that the text in Jonsson's book gave it the edge over its rivals, being partly autobiographical but also doing much to explain how particular paintings came about, and how he has attempted to integrate birds and light as key elements of his work. There can be few readers who would fail to be impressed by this book and fascinated by its glimpses into the artistic mind.



4th: The Breeding Birds of Cumbria: a tetrad atlas 1997-2001

Edited by Malcolm Stott, John Callion, Ian Kinley, Colin Raven and Jeremy Roberts. Cumbria Bird Club, 2002 (see Brit. Birds 96: 153).

The use of colours and a bold design immediately made this atlas stand out from the other atlases that we had in our initial short-list (*The Breeding Birds of the London Area*, and *Wintering Birds of Northumberland*). The fact that the publication was heavily sponsored, both with overall corporate support plus individual sponsorship at a smaller scale for each species, has done much to provide the resources for a more lavish and attractive product. One or two judges remarked, not without a touch of envy perhaps, that the great variety of habitats and landscapes in Cumbria must inevitably make for a more 'interesting' avifauna. Neither of these facts should detract at all from the monumental effort which has gone into this book, which appeared within two years of the end of field-work, and only 14 years after the Cumbria Bird Club was founded, and we applaud the editorial panel for their vision and industry.

5th: Pipits & Wagtails of Europe, Asia and North America.

By Per Alström and Krister Mild. Christopher Helm/A&C Black, London, 2003 (see Brit. Birds 96: 265-266).

Completing a marvellously varied top five, this, along with the three books given 2nd, 3rd and 4th places, is another book which, in another year, could well have won this competition outright. As an identification handbook, it is thorough and authoritative, well endowed with high-quality illustrations, and will surely be a benchmark far into the future. As a panel, we wondered whether it would not have been better to cover all the world's pipits and wagtails, rather than restricting the work to Europe, Asia and North America. Like the *Migration Atlas*, however, this book has been a long time coming, and perhaps it was the right decision to publish at this stage. One judge also wondered whether the authors' inherently conservative approach to taxonomy (with regards to the 'splitting' versus 'lumping' debate) might affect sales. Well, it may do – but nonetheless we salute the authors for 'telling it as they see it' rather than pandering to fashion. Like all the books in the top five, this will surely provide a thoroughly worthy investment should you be interested in the main topic.

A further five titles also made the final short-list. *A Red Bird in a Brown Bag: the function and evolution of colorful plumage in the House Finch* (by Geoffrey E. Hill; Oxford University Press Inc., New York, 2002), perhaps aimed at more scientifically minded birdwatchers but nonetheless a really exciting story, explores the evolution of plumage coloration in the 'mundane, ubiquitous and familiar' House Finch. *The Atlas of Wintering Birds in Northumbria* (edited by John Day and Mike Hodgson; Northumberland & Tyneside Bird Club, 2003) was the second mightily impressive atlas from the north of England in our short-list this year. In the *New Encyclopedia of Birds* (edited by Christopher Perrins; OUP, Oxford, 2003), a top-flight collection of authors and illustrators have been skill-

fully integrated to produce a thoroughly excellent encyclopedia. *Flight Identification of European Seabirds* (by Anders Blomdahl, Bertil Breife and Niklas Holmström; Christopher Helm/A&C Black, London, 2003) is, despite some criticism that its coverage is heavy on ducks (which will nonetheless appeal to 'inland seabird' enthusiasts) and light on 'real' seabirds, a marvellous collection of photos and a most useful introduction to a subject which we surely will hear more about in the future. Finally, *The Complete Guide to the Birdlife of Britain & Europe* (by Peter Hayman and Rob Hume; Mitchell Beazley, London, 2001) occupies an already crowded niche, but is thoroughly reliable in text and illustration and provides a really good introduction to the subject.

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County and local bird reports in Britain & Ireland

David K. Ballance

It seems useful at the beginning of a new century to assemble a list of current county and local bird reports. In 1900, the only annual bird reports of any substance were those for Norfolk/Suffolk and the Bloxham area of Oxfordshire (both published in *The Zoologist*), Shropshire/North Wales (in the *Record of Bare Facts* of the Caradon & Severn Valley Field Club), Hertfordshire, Epsom College, Rugby School, Marlborough College, Halifax, and Cardiff/South Wales. Of these, only that for Hertfordshire is still published by the original society, though the current Shropshire and Glamorgan reports can claim descent from the early series.

By 1950, there were 34 of what might be reckoned as 'county' reports, including one in Scotland (although rather thin, for Berwickshire), one in South Wales, and those for the Isle of Man, Guernsey and Jersey. There were also about 38 local reports, including one Welsh and three Scottish. Ten of these were issued by school natural history societies, which are now all but extinct; as far as I am aware, there have been no annual reports from them since the early 1980s.

The total number of reports rose to 94 in 1960, 125 in 1970, 185 in 1980 and 215 in 1990. These exclude 98 which were current for single years or short runs between 1960 and 1996, and which happened not to be issued in the first year of a particular decade. In 2003, I listed 264 reports as having appeared between 1996 and 2002, or for part of that period. This takes no account of some minor personal issues which both started and finished during the same years. Also excluded are bulletins, newsletters, reports in calendar form (with no species list), occasional society publications under separate titles (as in Bristol, Doncaster and Sheffield), 'birding' journals (as in Essex and Yorkshire),

and all but a few ringing reports, where the only inclusions are those with a full annual species list for a site. Two types of 'internal' report are sometimes seen in public: the first is for a single site or small area as a contribution to a county report (as for a number of places in Cheshire); the second is the warden's report to the organisation in charge of the site (as for most reserves). These have been excluded if I was aware of their purpose.

Of the 264 reports, 73 are for counties or other large areas: 38 in England (including two for Yorkshire, though the task of reporting annually on all Yorkshire species has been abandoned); ten in Wales (including both Glamorgan reports); 18 in Scotland; one in Northern Ireland (the provincial issue); two each in the Channel Islands and the Republic of Ireland; one in the Isle of Man; and one for offshore installations. In Wales, the Montgomery report is in abeyance and Radnor, without a regular annual report since 1987, is not included here. Three Scottish county reports have not been published recently: Perth & Kinross can be obtained by e-mail, Caithness may merge with Highland, and West Lothian has ceased (though it might better be regarded as a local report, as it falls within the larger Lothian area). Current local reports total at least 163, of which no fewer than 86 are issued in the area covered by the West Midland Bird Club, Derbyshire, Nottinghamshire, Cheshire and the old counties of Lancashire and Yorkshire. A further 28 are included, since they may be found in reference books (such as *The Birdwatcher's Yearbook*) and so can be considered as published regularly. Of these, 16 have certainly ceased publication. A further three have probably done so, but eight others which are now in abeyance are actively planning restarts. One (*Birds of Rotherham*) has moved to a website. Reports which are in

abeyance but have some prospect of a restart have been kept in the main county lists; those which have certainly or probably ceased are square-bracketed below the active ones. The national reports for Wales, Scotland and Ireland have not been included, but that for Northern Ireland has been, as the province has never produced individual county reports.

The list is arranged first by country, and then by alphabetical order of recording areas. Some of these recording areas coincide with the political map created in 1974: Avon, Greater Manchester and West Midlands have remained with us. Vice-counties are generally used as the basis of Welsh recording. Yorkshire is officially divided into them, though the loss of large areas to surrounding counties in 1974 diminished their usefulness, and they have never been reflected in local reporting. Where recording areas do not coincide with the present political boundaries, they have the great drawback that they are not marked on any maps that are in general use. In Scotland, there was no overall pattern of local reporting before the 1974 redrawing of boundaries, a fact which is reflected in the present arrangement, although the Harvie-Brown faunal system still has some influence in central areas.

Under these headings, reports for the whole area are listed first, followed by details of local journals in order of commencement. The report title is preceded by the following information (presented continuously, separated by semi-colons):

(i) The organisation(s) or individual(s) now responsible for their production, unless these appear in the titles.

(ii) The dates for which a report of some kind has been published for at least part of the area. Dates in square brackets are those of a reporting system which preceded the present one. Many reports developed slowly in the journals of local natural history societies, so that it may be hard to pinpoint the exact year when a 'full' bird report emerged. The first editors of new reports have sometimes introduced retrospective records for the preceding period, which can also lead to confusion about the starting date. Such reports are marked with an asterisk; the date given here is the most recent year covered by the earliest issue, not the first in the retrospective series. Dates without brackets show the years in which a full report has been produced in a modern form, but during that time the title or

the publisher, or both, may have changed, sometimes more than once. Some series, such as Lancashire/Cheshire and Dorset, are very complicated; for full details see Ballance (2000, 2002). The final year is the last for which a report is known to have been issued, or at least to have reached proof stage. Care should be used in referring to a few reports which bear the publication date on the cover more conspicuously than the recording year, or instead of it. The most obvious examples among county reports are Northamptonshire and, until recently, Wiltshire (*Hobby*), but there are a number of others.

(iii) A definition of the recording area (where necessary). This is not generally given for county reports or for works on well-known single sites, but some local reports deal with places obscure to an outsider, or which overlap counties; see Cheshire and Lancashire for good examples of the latter. There are three main types of local area: the circle (as in London or Rossendale); the set of adjacent OS 10-km squares (as in Lancaster or Sheffield); and the water-catchment area or other physical division (as in Wharfedale). A few clubs have irregular and apparently irrational areas, but these may have been due originally to a desire to annex promising sites when much of the terrain was as yet unoccupied (as in Leigh and the earlier Bradford report). One or two reports do not define their areas precisely.

(iv) The contact from whom copies of reports can be obtained, typically with a telephone number and an e-mail address. In most privately produced reports the address can be assumed to be that of the main author, who has been mentioned in the first line of the entry. A postal address is generally given only where a contact preferred not to give any other contact details.

Smaller reports rarely go to anyone outside a circle of local observers, and are produced in tiny quantities: a request for a copy may therefore be a surprise! Most major reports are sent to the BTO, and should also go to the Alexander Library at Oxford and to the RSPB Library at Sandy; all these libraries have large collections of the more important series, but there are many gaps. The libraries of English Nature, Scottish Natural Heritage and the Countryside Council for Wales also collect county and some local reports. In Scotland, the SOC Library

receives most of the national issues.

By the law of copyright, all journals which are produced wholly or partly for sale (and not simply issued to the members of a society) must be offered to the British Library, which normally accepts them, and to the five other copyright libraries – Oxford, Cambridge, Wales, Edinburgh and Dublin. These operate through an agency and are more selective, but the offer must be made. It is clear from my own experience in searching the national collections that some editors do not submit their products; nor do the authors of many privately issued ornithological pamphlets (or even books). All reports should be lodged in the most appropriate local libraries.

On the whole, local reporting, although it may seem chaotic to observers from more tightly organised countries, is in vigorous health. Yet the number of county reports which have fallen behind with publication has increased markedly during the last 15 years. In 1990, only four major reports appeared more than a year after the recording year, but in 2000 at least 14 were late to this extent; in addition, one English and two Scottish annual reports had ceased, though another had reappeared. This is a minimum figure, since some societies do not date their reports, and lateness can often be inferred only from the Chairman's apology in a preface. This was a decade in which almost all editors transferred to a computerised system

and several counties had teething troubles with this, while others fell behind during the production of an atlas. It is not yet clear whether any effects have been produced by the development of Environmental or Biological Records Centres. For at least one report (*Suffolk Birds*) the preliminary sorting of material has been done by the local Records Centre.

Of the more limited reports, at least 36 are concerned with post-industrial sites, especially those along the river valleys of the north. Another 12 are from reservoirs and 17 from observatories. Further analysis is difficult, as many sites fall into more than one category, but at least 25 more are from 'official' nature reserves or from other coastal areas. About six are from public parks, but I suspect that others of this type have not been seen. Some have been started because a group of observers were dissatisfied with the county report, either for lateness or for inadequate treatment of local records, which is bound to happen to some extent in larger counties.

I hope that readers will contact me about errors and omissions, however minor. I am sure that other local reports exist and I should like to hear about them. Although this first list is being published in hard copy, it will be available in due course on the *British Birds* website (www.britishbirds.co.uk), in a format which will be more easily updated.

List of reports: autumn 2003

(Note: Abbreviations have been kept to a minimum. A forward slash (/) in dates is used for a single report issued for more than one year.)

ENGLAND

Avon

Avon Bird Report: Avon Ornithological Group; [1936-73], 1974-2001–; Bath & NE Somerset/N Somerset/Bristol/S Gloucestershire; H. Rose: tel. (0117) 968 1638, e-mail h.e.rose@bris.ac.uk

North Somerset Levels Winter Birds Survey (1994/95-2002/03) and *Breeding Birds Survey* (1995-2000, 2002-03); Weston-super-Mare RSPB local members' group; eight areas from Wick St Lawrence to Nailsea Moor and S to Congresbury and Puxton; Trevor Riddle: tel. (01934) 835208.

Magazine of the Bath Natural History Society: 1957-2002–; 7-mile radius of Bath Guildhall, including parts of Bath & NE Somerset, Wiltshire, S Gloucestershire; Gillian Barrett, 57 Lyncombe Hill, Bath BA2 4PQ.

Steep Holm Natural History Report: Kenneth Allsop Memorial Trust; [1963-68], 1977-2000/01– (biennial); Joan Rendell: tel. (01934) 632307.

Bedfordshire

The Bedfordshire Bird Report: Bedfordshire Bird Club in *Trans. Bedfordshire Nat. Hist. Soc.*; 1947-2001–; Mary Sheridan: tel. (01525) 378245.

Birds of Priory Country Park: Private (D. Kramer); 1990/91-2002–; tel. (01234) 349307, e-mail daviddavekramer@aol.com

Berkshire

The Birds of Berkshire: Reading Ornithological Club; [1922*-73], 1974-1996/97-; post-1974 county; Peter Standley: tel. (01344) 623502.

Annual Report of the Newbury District Ornithological Club: [1953*-63], 1970-2000-; 10-mile radius of Newbury, including parts of Hampshire and Oxfordshire; Trevor Maynard: tel. (01635) 36752.

Theale Area Bird Report: Theale Area Bird Conservation Group; 1989-2002-; Brian Uttley: tel. (01189) 832894, e-mail msmith8741@aol.com

Moor Green Lakes NR Annual Report: Moor Green Lakes Group; 1993/94-2002/03-; main site in Berkshire, but adjacent river is Hampshire border; Blackwater Valley Countryside Service: tel. (01276) 686615, e-mail blackwater.valley@hants.gov.uk

See also Hampshire, London, Oxfordshire

Buckinghamshire

Buckinghamshire Bird Report: Buckinghamshire Bird Club; [1922*-79], 1980-2001-; Rob Andrews: tel. (01494) 716604, e-mail rob-andrews@copeshroves.freeseerve.co.uk

[*Annual Report:* Amersham Birdwatching Club; 1977-98 (last).]

See also London, Oxfordshire

Cambridgeshire

Cambridgeshire Bird Report: Cambridgeshire Bird Club; 1927-2001-; post-1974 county, including Huntingdon and Peterborough; Bruce Martin: tel. (01223) 700656, e-mail bruce.s.martin@ntlworld.com

Wicken Fen Bird Report: National Trust [1969-80], 1996-2002-; Martin Lester: tel. (01353) 720274, e-mail awnmdl@smtp.ntrust.org.uk

Paxton Pits Breeding Bird Survey: St Neots Bird and Wildlife Club; 1994-2002-; Trevor Gunton: tel. (01480) 473562.

Peterborough Birds: Peterborough Bird Club; 1998-2001-; TF11/21/00/10/20/30, TL09/19/29/39/18/28, including parts of Cambridgeshire, Northamptonshire, Lincolnshire and Rutland; Jane Williams: tel. (01778) 345711, e-mail jane@oldrectory.screaming.net

Cheshire

Cheshire and Wirral Bird Report: Cheshire and Wirral Ornithological Society; [1915*-63], 1964-2001-; David Cogger: tel. (01606) 832517, e-mail memsec@cawos.org

Report of the Hilbre Bird Observatory & Ringing Station: 1957-2002-; Stephen Williams: tel. (07976) 275944, e-mail steve@hilbrebirdsobs.fsnet.co.uk

Alderley Park and Radnor Mere Wildlife Report: Natural History Society, AstraZeneca Leisure & Social Club; 1974, 1978-2002-; S of Alderley Edge; A. H. Pulsford: tel. (01565) 880171, e-mail hugh.pulsford@astrazeneca.com

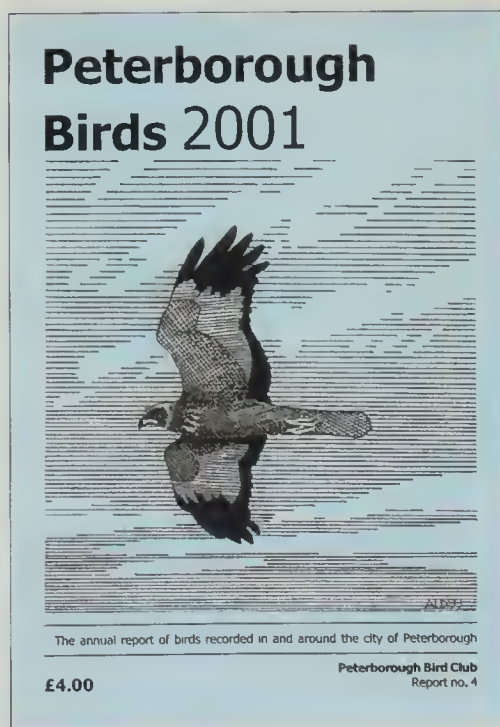
Annual Report of the Woolston Eyes Conservation Group: 1978/79-2002-; E of Warrington; Brian Martin: tel. (01925) 264251, e-mail brianmartin1940@hotmail.com

Annual Report of the Nantwich Natural History Society: 1979-2001-; SJ54/55/64/65, including part of Shropshire and small area of Wrexham (VC 50: Denbigh); Mike Holmes: tel. (01270) 611577, e-mail mike@uimprove.com

Annual Report of the South-East Cheshire Ornithological Society: 1984-2002-; Cheshire parts of SJ74/75/76/85/86; Colin Lythgoe: tel. (01270) 582642, e-mail colinlythgoe@haslington9.freeseerve.co.uk

[*North West Region Bird Report:* North West Birding Partnership; 1990-98 (last). Covered rare and scarce birds only, for Cheshire, Cumbria, Greater Manchester, Lancashire & N Merseyside, Clwyd, Gwynedd, Anglesey & Isle of Man]

See also Lancashire



Cleveland

[The 1974-95 county still produces its own report, with the only full annual coverage for the whole area. Here, it is classified under Yorkshire, which abandoned Cleveland officially in 1974, but in 1995 began to take it back, to preserve the unity of VC 62. The northern half of the area was never abandoned by Durham.]

Cornwall & Scilly

Birds in Cornwall: Cornwall Birdwatching & Preservation Society; 1931-2000-; Colin Boyd: tel. (01326) 563658.

Isles of Scilly Bird & Natural History Review: Isles of Scilly Bird Group; [1957-64], 1969-2002-; Nigel Hudson: tel. (01720) 422267, e-mail nig_hudson@lineone.net



Caradon Wildlife: Caradon Field & Natural History Club; 1984-2001-; Caradon DC (SE Cornwall); Tony Aston, 4 Dinas Court, Donderry, Torpoint PL11 3LZ.

Cumbria

Birds and Wildlife in Cumbria: Cumbria Naturalists' Union; 1972*-2001-; David Shackleton: tel. (01931) 712643, e-mail dave.shack@care4free.net

Walney Bird Observatory Report: 1964-2002-; K. Parkes, 176 Harrogate Street, Barrow-in-Furness, Cumbria LA14 5NA.

Bassenthwaite Lake NNR Annual Report: Lake District National Parks Authority; 1995-2002-; Peter Barron, Park Management Dept: tel. (01768) 779633.

See also Cheshire, Lancashire

Derbyshire

The Derbyshire Bird Report: Derbyshire Ornithological Society; [1917-54], 1955-2001-; Richard James: tel. (01332) 771787, e-mail rmrjames@yahoo.co.uk

Annual Report of the Ogston Bird Club: 1969/70-2002-; Ogston Reservoir, SW of Clay Cross; M. A. Hill: tel. (01623) 812159, e-mail aamah28@hotmail.com

Annual Report of the Carsington Bird Club: 1992-2002-; Carsington Reservoir, W of Wirksworth; Dorothy Evans: tel. (01246) 238421, e-mail dmevans41@lineone.net

Drakelow Wildlife Report: Powergen; 1969-96-; NNE of Walton-on-Trent; Tom Cockburn: tel. (01283) 217146. Restart hoped for.

Carr Vale Bird Report: Private (Mark Beevers); 1997-2002-; W of Bolsover; tel. (01246) 240719.

See also Nottinghamshire for reports from the common border, and Yorkshire (Sheffield)

Devon

Devon Bird Report: Devon Bird Watching & Preservation Society; 1929-2001-; Harvey Kendall: tel. (01288) 353818, e-mail harvey.kendall@btopenworld.com

Annual Report of the Lundy Field Society: 1947-2000/01-; Chris Webster: tel. (01823) 282889, e-mail ifs@webster5.demon.co.uk

The Dartmoor Bird Report: Dartmoor Study Group; 1996-2001-; Roger Smaldon: tel. (01752) 779586.

[*Birds Seen in Dawlish Warren LNR:* Teignbridge District Council; 1988-98 (last).]

See also Somerset (for Exmoor)

Dorset

Dorset Bird Report: Dorset Bird Club; [1920-76], 1977-2001-; Miss J. W. Adams: tel. (01929) 552299.

Report of the Portland Bird Observatory & Field Club: 1963-2002-; Martin Cade: tel. (01305) 820553, e-mail obs@btinternet.com

The Birds of Christchurch Harbour: Christchurch Harbour Ornithological Group; 1956-2002-; includes Lower Avon Valley (partly in Hampshire); Ian Southworth: tel. (01202) 478093, e-mail lanbirder@aol.com

Annual Report of the Stour Ringing Group: 1981-2001-; recent issues have full species list for St Alban's Head & Lytchett Bay; Brian Creswell: tel. (01258) 817925, e-mail Cresres@ad.com

Durham

Birds in Durham: Durham County Bird Club; 1970-99-; pre-1974 county & 1974 addition from N Riding of Yorkshire; D. Sowerbutts: tel. (0191) 386 7201, e-mail d.l.sowerbutts@durham.ac.uk

See also Cleveland, Yorkshire

Essex

The Essex Bird Report: Essex Bird-Watching Society; 1949-2001-; pre-1965 county; Brian Cooper: tel. (01245) 251353.

Nature in North East Essex: Colchester Natural History Society; 1955 irregularly to 2001-; W to Braintree & Maldon; Brian Corben: tel. (01376) 561368.

East London Birders' Forum Report: 1999-2000-; Essex, Greater London and small part of Hertfordshire inside the M25, W to the A10; Mike Dent: tel. (0208) 527 7193, e-mail mike.elbf@ntlworld.com

See also London

Gloucestershire

Gloucestershire Bird Report: Gloucester Ornithological Co-ordinating Committee; [1948-62], 1963-2000-; post-1974 county; G. Avery: tel. (01452) 305002, e-mail gravity@hembirds.freemove.co.uk

Slinnbridge Bird Report: WWT; [1948-1954/55/56], c. 1985-2001-; WWT reserve and adjacent areas; Paul Marshall, WWT: tel. (01453) 890333 ext. 192, e-mail enquiries@wwt.org.uk

Annual Report of the North Cotswold Ornithological Society: 1983-2002-; SO90/91/92, SP01/02/03/10/11/12/13/22/23, including small parts of Worcestershire and Oxfordshire; T. Hutton: tel. (01386) 858511.

Report of the Cheltenham Bird Club: 1998-2001-; Gloucestershire (not clearly defined); F. Meredith: (01242) 516393, e-mail chelt.birds@virgin.net

Greater Manchester

Birds in Greater Manchester: Greater Manchester Bird Recording Group (from 2001); 1959-2001-; metropolitan county of 1974-86; Judith A. Smith: tel. (01942) 712615, e-mail judith@gmbirds.freemove.co.uk

Bird Report of the Leigh Ornithological Society: [1959*-70], 1971-2002-; S edge of SD51, SE part of SD61, SD71, most of SD50, SD60, most of SD70, NE part of SJ59, most of SJ69, NW part of SJ79, fragments of SD81, SD80, SJ58, SJ68 - mainly in Greater Manchester, small sections in Lancashire & N Merseyside and Cheshire; E. King: tel. (01942) 516314, e-mail eddieking85@hotmail.com

Elton Bird Report: Private (P. Baron); 1968-2002-; Elton Reservoir, SW of Bury; tel. (01617) 616531, e-mail peterbaron@supanet.com

Birds in Rochdale Metropolitan Borough: Rochdale Field Naturalists' Society; 1976-2002-; Mrs J. P. Wood: tel. (01613) 452012.

Audenshaw Bird Report: Private (R. Travis); 1983-2002-; reservoir, etc. E of Manchester; tel. (01613) 302607, e-mail raytravis@lineone.net

Annual Report of the Shell Pool Reserve Conservation Group: 1990-2002-; Carrington; P. Greenwood: tel. (01616) 135200, e-mail philg49_uk@yahoo.co.uk

Oldham Countryside and River Valley Bird Report: Oldham Countryside Ranger Service; 1994-2002-; Kath Butterworth: (01457) 875315, e-mail kath.butterworth@care4free.net

Chorlton Water Park, Kenworthy Wood and Barlow Tip Report: Private (P. Hines); 1999-2002-; River Mersey SSW of Manchester; tel. (01618) 815639, e-mail mersey_valley@mcr1.poptel.org.uk

[*Birds of/at Hollingworth Lake*: Private (I. Kimber); ENE of Rochdale; 1979-99 (last).]

[*Piethorne Valley Ornithological Report*: Private (N. Calbrade); E of Milnrow; 1994-2001 (last).]

[*Rumworth Lodge Ornithological Report*: Private (A. Wainwright); W of Bolton; 1995-96 only.]

[*Wigan Flashes Annual Report*: Wildlife Trust for Lancashire, etc; 1999-2000. In abeyance.]

See also Cheshire, Lancashire

Hampshire

Hampshire Bird Report: Hampshire Ornithological Society; [1935-57], 1958-2001-; Margaret Boswell: tel. (02380) 282105, e-mail mag.bos@btinternet.com

Annual Report of the Southampton Natural History Society: 1956/57-2002-; c. 15 miles from centre of Southampton; Phil Budd: tel. (02380) 394807, e-mail philbudd@ukonline.co.uk

Lakeside Country Park Bird Report: Private (Simon Ingram); 2001-02-; Eastleigh; tel. (02380) 611979, e-mail ingram@monks149.fsnet.co.uk

[*Hants/Surrey Bird Report*: Private (John Clark *et al.*); 1971-97/98; parts of SU72/82/92, most of SU73/83/93, 74/75/84/85/94/95, parts of SU76/86/96, including small parts of Berkshire and W Sussex. In abeyance.]

See also Berkshire, Dorset

Herefordshire

Annual Report of the Herefordshire Ornithological Club: 1951-2000– (retitled for 2001 as *The Yellowhammer*); I. Evans: tel. (01432) 265509, e-mail iforelaine@care4free.net

Hertfordshire

The Hertfordshire Bird Report: Hertfordshire Bird Club (Hertfordshire Natural History Society); [1878-1967], 1968-2000–; Jim Terry: tel. (0208) 905 1461, e-mail jim@jayjoy.fsnet.co.uk

Annual Report of the Rye Meads Ringing Group: 1961-1998/99/00– (triennial); Paul Roper: tel. (01992) 640388, e-mail rrmrg@care4free.net

Hilfield Park Reservoir Bird Report: Hertfordshire & Middlesex Wildlife Trust; 1990-2002–; NE of Bushey; Bob Cripps: tel. (01923) 672635, e-mail bob.cripps@btinternet.com

[*Stocker's Lake Bird Report:* The Friends of Stocker's Lake; 1988-96 (last); Rickmansworth.]

See also Essex, London

Isle of Wight

The Isle of Wight Bird Report: Isle of Wight Natural History & Archaeological Society/Isle of Wight Ornithological Group; [1939], 1953-2002–; D. J. Hunnybun: tel. (01983) 290880, e-mail davehunnybun@hotmail.com

Newtown NNR Report: National Trust; 1972-2001/02– (overlaps years); tel. (01983) 741020.

Nature Report of the Medina Valley Centre: 1986-2002–; tel. (01983) 522195, e-mail inso@medinavalleycentre.org.uk

Kent

Kent Bird Report: Kent Ornithological Society; [1935-37, 1939-47], 1952-2000–; Dave Sutton: tel. (01843) 842541, e-mail dave@suttond8.freemove.co.uk

Report of the Dungeness Bird Observatory Committee: [1952-56], 1957-2002–; David Walker: tel. (01797) 321309, e-mail dungeness.obs@tinyonline.co.uk

Report of the Sandwich Bay Bird Observatory: 1962-2000–; Gaynor Cross: tel. (01304) 617341.

Birds of St Margaret's: Private (I. Hodgson); 1978-2001–; tel. (01304) 820896.

The Birds of Boughton Park and Wierton Hill Farm: Private (Don Taylor *et al.*); 1985-2002–; SSE of Maidstone; tel. (01622) 745641, e-mail don@care4free.net

Bockhill and Kingsdown Bird Report: Private (Nigel Jarman); 1998-2001–; tel. (01304) 364252, e-mail nj@nigeljarman.fsnet.co.uk

See also London, Sussex

Lancashire & North Merseyside

The Lancashire Bird Report: the Birds of Lancashire & North Merseyside: Lancashire & Cheshire Fauna Society; [1915*-49], 1950-2002–; post-1974 boundaries; Dave Bickerton: tel. (01254) 886257, e-mail bickertond@aol.com

The Birds of Lancaster & District: Lancaster & District Birdwatching Society; 1959-2001–; SD45/46/47/55/56/57/65/66/67, including parts of Cumbria and Yorkshire; Andrew Cadman: tel. (01524) 734462, e-mail andrewokuk@yahoo.co.uk

Annual Report of the Chorley & District Natural History Society: 1975-2002–; Chorley Borough & E to Belmont; Phil Kirk: (01257) 266783, e-mail philkirk@clara.net

Bird Report of the Rossendale Ornithologists' Club: 1976-2002–; c. 10-km radius from Waterfoot, E of Rawtenstall, including parts of Greater Manchester and Yorkshire; Ian Brady: tel. (01706) 222120, e-mail ian.brady@optimacs.com

Heysham Bird Observatory & Nature Reserve Annual Report: 1980-2002–; RSPB Leighton Moss: tel. (01524) 701601.

Fylde Bird Report: Fylde Bird Club; 1983-2001–; boundary to S formed by Ribble estuary, to W by sea, to E by A6, to N by River Conder & Lune estuary at Glasson Dock; Paul Ellis: tel. (01253) 891281, e-mail paul.ellis24@btopenworld.com

Bird Report of the East Lancashire Ornithologists' Club: 1988-2002–; post-1974 Lancashire area of OS sheet 103; Doug Windle: tel. (01282) 617401, e-mail doug.windle@care4free.net

Marton Mere LNR Bird Report: Blackpool Borough Council; 1992-99–; David McGrath, Community & Tourism Services: tel. (01253) 476263, e-mail nature.reserve@blackpool.gov.uk In abeyance, hoped to restart.

Annual Bird Report of the Blackburn & District Bird Club: 1992-2002–; rectangular area: NW corner SD6040, NE 7440, SW 6016, SE 7416; Doreen Bonner: tel. (01254) 261480.

The Marshside Bird Report: Now private (Barry McCarthy, formerly RSPB); 1996-2001–; Marshside & Crossens Marshes, NE of Southport; tel. (01704) 213290.

The Stocks Report: Private (Margaret Brakes); 1998-2002-; Stocks Reservoir; tel. (01200) 446637, e-mail mbrakes@netscape.net

[*The Seaforth Bird Report*: Wildlife Trust for Lancashire etc; 1986/87-99. In abeyance.]

See also Cheshire, Greater Manchester

Leicestershire & Rutland

The Leicestershire and Rutland Bird Report: Leicestershire and Rutland Ornithological Society; 1941-2001-; S. Graham: tel. (01162) 625505, e-mail jsgraham83@aol.com

Annual Report of the Loughborough Naturalists' Club: 1962-2002-; NW Leicestershire; Judy Johnson: tel. (01509) 214711.

Annual Report of the Rutland Natural History Society: 1965-2000-; Mrs L. Worrall: tel. (01572) 747302.

[*The Birds of Rutland Water*: Leicestershire & Rutland Wildlife Trust; 1975/76-91/92/93/94/95; Tim Appleton: tel. (01572) 770651, e-mail awbc@rutlandwater.org.uk]

Lincolnshire

Lincolnshire Bird Report: Lincolnshire Bird Club; [1911-46], 1947-1996-, later years in active preparation, perhaps to be combined; Rob Watson: tel. (01754) 763481, e-mail hwatson@freenetname.co.uk

Gibraltar Point NNR Annual Wildlife Report: Lincolnshire Wildlife Trust; 1949-2001-; tel. (01754) 762677, e-mail lincstrust@gibpoint.freemove.co.uk

Scunthorpe and North West Lincolnshire Bird Report: Scunthorpe Museum Society; 1973-98-; Craig Nimick: tel. (01724) 339659, e-mail craignimick@hotmail.com

See also Yorkshire

London

London Bird Report: London Natural History Society; [1914-35], 1936-99-; 20-mile radius from St Paul's, encompassing Greater London, parts of Hertfordshire, Essex, Kent & Surrey, fragments of Buckinghamshire & Berkshire; Catherine Schmitt: tel. (0208) 346 4359.

The local reports are those with areas lying entirely within present Greater London boroughs. Those marked † are in Surrey VC, which is the area covered by the *Surrey Bird Report*.

Beddington Farm Bird Report†: Beddington Farm Bird Group; 1961/62, 1987-2001-; W side of Croydon; Richard Bosanquet: tel. (0208) 660 8076.

Annual Bird Report of the Surbiton & District Bird Watching Society†: 1970/71-2001-; Thelma Caine: tel. (01372) 468432, e-mail t.caine@cabi.org

Wimbledon Common and Putney Heath Bird Report†: Private (Dave Wills); [1974-82], 1983-2002-; Ranger's Office, Wimbledon Common, London SW19 5NR, e-mail jimreader@globalnet.co.uk

Welsh Harp Report: Welsh Harp Conservation Group; 1987-2002- (mostly biennial); reservoir in Brent; Brenda McLean: tel. (0208) 361 2658.

Croydon Bird Surveys†: Croydon RSPB Local Members' Group; 1995-2002-; Greater London Borough of Croydon; Sheila Mason: tel. (0208) 777 9370.

Greenwich Park Bird Report: Private (Patricia Brown); 1996/97-2000-; tel. (0208) 852 9011. Restart under consideration.

London Wetland Centre Bird & Natural History Report: WWT; 2000-; The Wetland Centre, Barnes: tel. (0208) 409 4400, e-mail info.london@wwt.org.uk

[*Hampstead Heath Ornithological Report*: Private (latterly W. E. Oddie); 1946-99; Hampstead Heath Information Centre: tel. (0207) 482 7073. In abeyance, but database maintained.]

[*Dagenham Chase Bird Report*: London Wildlife Trust & Dagenham Bird Group; 1992-98 (last); NNE of Dagenham.]

See also Berkshire, Buckinghamshire, Essex, Hertfordshire, Kent, Surrey



Norfolk

Norfolk Bird and Mammal Report: Norfolk & Norwich Naturalists' Society; [1874-83, 1887-1932, 1944-52], 1953-2001-; post-1974 county, including former part of E Suffolk (VC 25); David Paull: tel. (01603) 457270, e-mail DavidLPaull@aol.com

Sheringham Bird Observatory Annual Report: Private (Tim Wright); [1974/75-80], 1983-84, 1987-2002-; tel. (01263) 825433, e-mail Tw75@aol.com

Annual Report of the Nar Valley Ornithological Society: 1977-2002-; TF60/61/62/70/71/72/80/81/82/90/91/92; Ian Black: tel. (01760) 724092, e-mail ian_a_black@hotmail.com

Welney Bird Report: WWT; 1992-2002-; Carl Mitchell: tel. (01353) 860711, e-mail welney@wwt.org.uk

Breckland Bird & Mammal Report: Private (Andy Wilson & Mike Toms); 1998-99 (last); TF70/80, TL77/78/79/87/88/89/97/98/99; Mike Raven, BTO: tel. (01842) 750050, e-mail mike.raven@bto.org. In abeyance, restart hoped for.

See also Suffolk

Northamptonshire

Northants Birds: Northamptonshire Bird Club; [1938-68], 1969-2001-; post-1974 county, for Peterborough see Cambridgeshire; Alan Coles: tel. (01604) 401874.

See also Cambridgeshire, Oxfordshire

Northumberland

Birds in Northumbria: Northumberland & Tyneside Bird Club; [1935-69], 1970-2001-; pre-1974 county; Muriel Cadwallender: tel. (01665) 830884, e-mail tmcadwallender@lineone.net

Birds on the Farne Islands: National Trust & Natural History Society of Northumbria (in *Trans. Nat. Hist. Soc. Northumbria*, but issued separately); 1946-2002-; Hancock Museum: tel. (0191) 232 6386, e-mail nhsn@ncl.ac.uk

Nottinghamshire

The Birds of Nottinghamshire: Nottinghamshire Birdwatchers; 1943-2001-; Reg Davis: tel. (01159) 228547, e-mail regdavisreg@aol.com

Annual Report of the Erewash Valley Bird Group: 1986-2002-; river corridor N from Langley Mill to Jacksdale, partly in Derbyshire; David Sneap: tel. (01773) 603008.

Colwick Wildlife: Colwick Park Wildlife Group; 1989-99; Carlton, E Nottingham; Michael Walker: tel. (01159) 615494. Future under consideration.

The Lound Bird Report: Lound Bird Club; 1990-2000-; gravel-pits along River Idle N of Retford; P. Hobson: tel. (01405) 816925, e-mail tichodroma@wallcreeper.l.freeserve.co.uk

King's Mill Reservoir Bird Report: Private (P. Naylor); 1991-2002-; Mansfield; tel. (07903) 086144.

Wildlife Report for Attenborough NR: Nottinghamshire Wildlife Trust; 1993/94/95/96, 1997/98/99/2000-; John Ellis, NWT: tel. (01159) 588242, e-mail jellis@nottswt.cix.co.uk

Annual Report of the Bennerley Marsh Wildlife Group: 1995-2001-; Awsworth, bordering to N on Erewash Valley report (above), partly in Derbyshire; Reg Davis: tel. (01159) 228547, e-mail regdavisreg@aol.com

Netherfield Wildlife Group Annual Report: 1999*-2002-; N of Radcliffe on Trent; Neil Matthews: tel. (01159) 554484.

Report of the Pleasley Pit Nature Study Group: 2001-02-; NW of Mansfield; Loz Brooks: tel. (01623) 822378, e-mail loz.brooks@btinternet.com

See also Derbyshire, Yorkshire (SK58)

Oxfordshire

Birds of Oxfordshire: Oxford Ornithological Society; [1892-1914], 1922*-2001-; post-1974 county; Roy Overall: tel. (01865) 775632.

Annual Report of the Banbury Ornithological Society: 1966-2002-; SP32/33/34/35/42/43/44/45/52/53/54/55, including parts of Buckinghamshire, Northamptonshire, Oxfordshire, Warwickshire; Andy Turner: tel. (01295) 720938, e-mail andyturner888@hotmail.com

[*The Birds of Otmoor*: Private (Jon Baker); 1995-99 (last).]

See also Berkshire

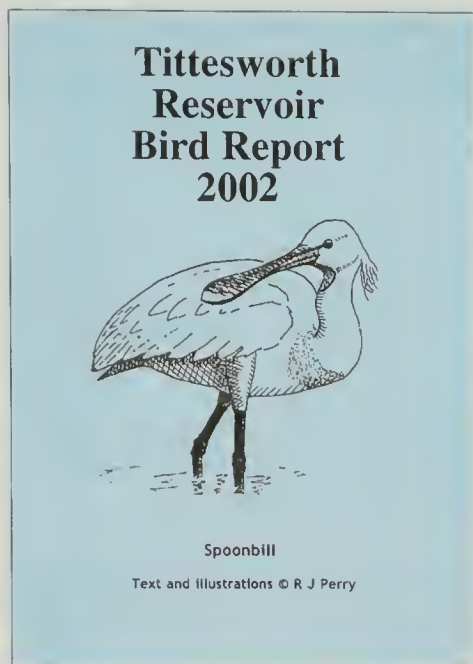
Shropshire

The Shropshire Bird Report: Shropshire Ornithological Society; [1891-1955], 1956-2001-; John Turner: tel. (01743) 821678, e-mail peregrineleada@aol.com

See also Cheshire

Somerset

Somerset Birds: Somerset Ornithological Society; [1912*-13*], 1915-2001-; post-1974 county; David Ballance: tel. (01643) 706820.



The Exmoor Naturalist: Exmoor Natural History Society; 1978-2002–; Exmoor, including Devon section; Caroline Giddens: tel. (01643) 707624, e-mail carol.enhs@virgin.net

Staffordshire

For main report, see Warwickshire, but Staffordshire dates are: [1935-47], 1948-2000–

Belvide Report: West Midland Bird Club; 1989-2000–; NE of Brewood; PO Box 1, Studley, Warwickshire B80 7JG, e-mail secretary@westmidlandbirdclub.com

Tittesworth Reservoir Bird Report: Tittesworth Ranger Service; 1997-2002–; NNE of Leek; R. J. Perry: tel. (01625) 432668, e-mail raymond@gotthere.uk.com

Westport Lake Report: Private (D. Kelsall); 2001-02–; Middleport; tel. (01782) 623708, e-mail d.kelsall@virgin.net

Suffolk

Suffolk Birds: Suffolk Naturalists' Society; 1950-2001–; includes Lothingland (VC 25), now in Norfolk; Ipswich Museum: tel. (01473) 433547, e-mail sbrc@globalnet.co.uk

Trimley Marshes Wetland Reserve Report: Suffolk Wildlife Trust; 1993-96/97/98, 1999-2001 (now changing to biennial); W of Felixstowe; Mick Wright: tel. (01473) 710032, e-mail micktwright@btinternet.com

[*Lackford Wildlife Reserve Report*: Suffolk Wildlife Trust; 1988-98/99; NW of Bury St Edmunds. Probably in abeyance.]

See also Norfolk

Surrey

Surrey Bird Report: Surrey Bird Club; [1935-37, 1939-47], 1953-2000–; VC 17 (including parts now in Greater London), 1965 addition of Spelthorne (Middlesex) not included; J. Gates: tel. (01252) 727683.

The Unstead Bird & Wildlife Report: Unstead Bird Group; 1996-2000–; Godalming; Brian Milton: tel. (01483) 429648.

See also London. Reports for areas formerly in Surrey but now in Greater London are listed there, though they also contribute to the *Surrey Bird Report*.

Sussex (East & West)

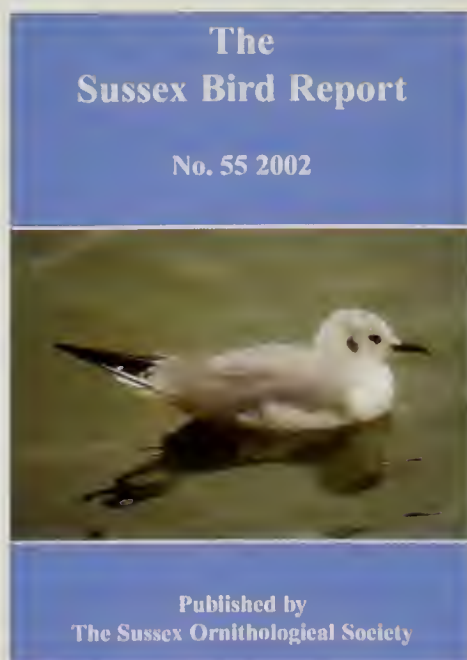
Sussex Bird Report: Sussex Ornithological Society; [1935-37, 1939-47], 1948-2001–; J. E. Trowell: tel. (01424) 813722, e-mail membership@susos.org.uk

The Hastings and East Sussex Naturalist: Hastings Natural History Society; 1914-2002–; SE Sussex & adjacent parts of coastal Kent; Alan Weeks: tel. (01424) 813265. The oldest 'local' report.

Annual Report of the Shoreham District Ornithological Society: 1953-2001–; Brighton Marina W to Ferring, and inland to Henfield; Mrs B. Reeve: tel. (01273) 452497.

Warden's Report for Pagham Harbour LNR: West Sussex County Council; 1978-94, 1999-2002–; Rob Carver: tel. (01243) 641508, e-mail pagham.nr@westsussex.gov.uk

[*Annual Report of the Rye Harbour LNR Management Committee*: 1970-98, now only five-year summary; Barry Yates: tel. (01797) 223862, e-mail yates@clara.net]



[*Pett Pools Project Report*: Sussex Ornithological Society; 1979; 81/82/83; 95-97 (last).]

See also Hampshire

Warwickshire

The Birds of Staffordshire, Warwickshire, Worcestershire and the West Midlands: West Midland Bird Club; 1934-2000-; post-1974 counties as in title; PO Box 1, Studley, Warwickshire B80 7JG, e-mail secretary@westmidlandbirdclub.com

Brandon Marsh NR Report: Warwickshire Wildlife Trust; [1960*], 1967-2002-; SE side of Coventry; Ken Bond: tel. (02476) 328785.

Ladywalk Annual Report: West Midland Bird Club; 1971-2002-; ENE of Water Orton; M. J. West: tel. (01922) 639931.

Annual Report of the Marsh Lane NR: Packington Estate; 2001-; NNW of Meriden; Kay Gleeson: tel. (01676) 522020, e-mail kaygleeson@packingtonestate.co.uk

See also Gloucestershire, Oxfordshire

West Midlands

For main report see Warwickshire (above).

The Birds of Sheepwash Urban Park: Private (D. Waite); 1985-2002-; NE side of Dudley; tel. (01215) 201454.

The Birds of Smestow Valley & Dunstall Park: Smestow Valley Bird Group; 1987-2001-; W side of Wolverhampton; Frank Dickson: tel. (01902) 493733.

RSPB Sandwell Valley Bird Report: 1999-2001-; E of West Bromwich; Colin Horne: tel. (01213) 577395, e-mail colin.horne@rspb.org.uk

Lutley Wedge Bird Report: Private (P. & S. Clement & C. Round); 2000-02-; farmland near Halesowen; tel. (01215) 011105, e-mail craigground@hotmail.com

Wiltshire

Hobby: Wiltshire Ornithological Society; [1903-73], 1974-2000-; John Osborne: tel. (01373) 864598, e-mail jobo@care4free.net

See also Avon

Worcestershire

For main report, see Warwickshire (above).

The Birds of Upton Warren: Worcestershire Wildlife Trust; 1984-2001-; S of Bromsgrove; John Belsey: tel. (01527) 501391.

Grimley Gravel Pit Report: Private (R. Blackmore); 2002-; The Wagon Wheel, Grimley, Worcestershire WR2 6LU.

See also Gloucestershire

Yorkshire

Yorkshire Bird Report: Yorkshire Naturalists' Union (Ornithological Section); 1940-97 (last), five-year report for 1998-2002 is planned; from 1974 to 1982, discarded areas ceded to Cleveland, Cumbria, Durham, Greater Manchester and Lancashire, but retained 'North Humberside' (but see note under Cleveland, above); J. Newbould: tel. (01305) 837384, e-mail janewbould@aol.com

Rare and Scarce Birds in Yorkshire: 1998/9-2001-; as previous entry; J. Newbould: tel. (01305) 837384, e-mail janewbould@aol.com

VC 61 (SE)

Spurn Wildlife: Spurn Bird Observatory; 1945-2002-; Paul Collins, Kew Villa, Kilnsea, E Yorkshire HU12 0UG, e-mail PCNFA@hotmail.com

Filey Bird Report: Filey Brigg Ornithological Group; 1976-2002-; 3-mile radius from Filey; C. E. Court: tel. (01723) 515925.

Bird Report of the Flamborough Ornithological Group: [1976-92], 1993-96, 2002-; George Bennett: tel. (01964) 532261.

Hull Valley Wildlife Report: Hull Valley Wildlife Group; [1977-96], 1997-99, 2001-; SE92/93/94/95, TA02/03/04/05/12/13/14/15, also North Cave wetlands to W of area and Stone Creek to E; D. C. Marshall: tel. (01482) 640066. [Originated in *Birds of Tophill Low*; 1999 was titled *East Yorkshire Bird Report*.]

Blacktoft Sands Ornithological Report: RSPB; 1986-92, 2000-02-; RSPB Warden: tel. (01405) 704665.

Pulfin Bog Natural History Report: Private (D. G. Hobson); 1989-2002-; NE of Beverley; tel. (01482) 867529, e-mail davidhobbo@aol.com

Saltmarshes Delph Report: Yorkshire Wildlife Trust; 1998-2002-; E of Howden; B. H. Greenacre: tel. (01405) 764160, e-mail barryandzee@onetel.net.uk

VC 62 (NE)

Annual Report of the York Ornithological Club: 1966-2001-; SE53/54/55/56/57, 63/64/65/66/67, 73/74/75/76/77, including parts of VC 61 & 64; T. Lawson: tel. (01904) 795489, e-mail info@yorkbirding.org.uk

Scarborough & District Bird Report: Scalby Nabs Ornithological Group; [1973-79], 1995-2002-; Robin Hood's Bay S to edge of Filey, c. 5 miles inland; Robin Hopper: tel. (01723) 369537.

Cleveland Bird Report: Teesmouth Bird Club; 1974-2001-; 1974-95 county of Cleveland – now Redcar and Cleveland/Middlesbrough in (old) Yorkshire, Hartlepool in (old) Durham, and Stockton-on-Tees in both. See Cleveland (above); John Sharp: tel. (01287) 633976.

Whitby Bird Report: Private (Russell Slack); 1986-2001-; N to Staithes, S to Boggle Hole; tel. (01142) 845300.

Annual Report of the North Yorkshire Forest Bird Study Group: 1993-98/99-2002-; Brian Walker, Forestry Office: tel. (01751) 470704.

Annual Newsletter of the Ryedale Natural History Society: 1999-2002-; Gill Smith: tel. (01439) 788385, e-mail apl385@compweave

VC 63 (S & SW)

Recorder's Report Relating to Birds: Bradford Naturalists' Society; [1944-50], 1951-2002-; Bradford and neighbouring areas of Calderdale & Kirklees, N to Wharfedale, W to River Hodder, NW to River Lune, Bowland & Sedburgh (Lancashire/Cumbria) – thus covers parts of VC 64 & 65; I. Hogg: tel. (01274) 727902.

Doncaster Bird Report: Doncaster & District Ornithological Society; 1955*-2000-; 10-mile radius of Doncaster Museum; Mark Roberts: tel. (01302) 361731, e-mail robemark@aol.com

Birds in Huddersfield: Huddersfield Birdwatchers' Club; 1966-2001-; SE00/01/10/11/20/21, SE02/12, S of River Calder; David Butterfield: tel. (01484) 862006, e-mail dbutt52@hotmail.com

Barnsley Area Bird Report: Barnsley & District Bird Study Group; 1970/71-2000-; 10-mile radius from Barnsley town centre; Graham Speight: tel. (01226) 321300.

Potteric Carr NR Bird Report: Yorkshire Wildlife Trust; 1973-76, 1988/89, 1994-2002-; Doncaster; John Hancox: tel. (01709) 543117, e-mail hancoxj@aol.com

Birds in the Sheffield Area: Sheffield Bird Study Group; 1973-2001-; SK10/17/18/19, 20/27/28/29, 30/37/38/39, 46/47/48/49/50, including parts of N Derbyshire; Margaret Miller: tel. (01142) 304110, e-mail margaret@margaret6.fsnet.co.uk

Birds of Rotherham: Rotherham & District Ornithological Society; 1974-82/83, 1991-99 (last); parts of SK48/58/49/59 in Rotherham Met. Borough Council; continues at www.rotherhambirds.co.uk

Denaby Ings NR Bird Report: Private (Darren Buxton); 1974-77, 1990-95, 1997, 1998-2002-; W of Conisbrough; tel. (01709) 894389.

Carlton Marsh LNR Natural History Report: Barnsley Met. Borough Council; 1976-2001-; NE of Barnsley; Nigel Labdon, Barnsley MBC: tel. (01226) 772142, e-mail nigellabdon@barnsley.gov.uk

Thorpe Marsh NR Annual Report: Yorkshire Wildlife Trust; 1980-2001-; Thorpe in Balne, NNE of Doncaster; Eric Denby: tel. (01302) 786053, e-mail Edenbytmnr@aol.com

Old Moor & Broomhill Ings Bird Report: Private (D. Waddington); 1980*-2002-; Wath upon Dearne; Debra Bushby: tel. (01226) 751593, e-mail dave@waddington17.fsnet.co.uk

Thorne Moors Bird Report: English Nature; 1980-83, 1990-2002-; extreme E of site (Crowle Moors) in Lincolnshire; Bryan Wainwright: tel. (01405) 815362, e-mail bryan@wainwright99.fsnet.co.uk

Worsbrough Valley Bird Report: Barnsley Met. Borough Council; 1984-2002-; S of Barnsley; Richard Moss, Country Park HQ: tel. (01226) 774527, e-mail worsbroughmill@barnsley.gov.uk

Report of the Bradford Ornithological Group: 1987-2002-; S to Halifax, W to beyond Keighley, N to N of Otley, E to edge of Pudsey, including part of VC 64; Jenny Barker, 4 Chapel Fold, Slack Lane, Oakworth, Keighley BD22 0RQ.

Winterset Area Annual Bird Report: Winterset Wildlife Group; 1988-2002-; Ryhill, NNE of Barnsley; Steve Denny: tel. (01924) 864487.

Annual Report of the Five Towns Bird Group: 1989-99; Castleford, Ferrybridge, Knottingley, Pontefract, Normanton; Robert Knight: tel. (01977) 510761. In abeyance, restart considered.

Report of the Halifax Birdwatchers' Club: 1991-2002-; Calderdale Met. Borough Council; Nick Dawtrey: tel. (01422) 364228.

The Birds of SK58: SK58 Birders; 1993-99-; SK58 (partly in Nottinghamshire); Andy Hirst: tel. (01909) 560310, e-mail sk58birders@sk58.freemove.co.uk

Hatfield Moors Bird Report: English Nature; 1995-98, 1999/00, 2001-; EN Wakefield Office: tel. (01924) 334500, e-mail humber.pennines@english-nature.org.uk

Southfield Reservoirs & Went Lugs Bird Report: Southfield Reservoirs Birdwatching Group; 1995-2002-; SE of Snaith; Clive Featherstone, 116 Haynes Road, Thorne, Doncaster DN8 5HY, e-mail clivefeatherstone@hotmail.com

A Bird Report for Beal Carrs: Private (John Wint); 1999/00-2001-; near Knottingley; tel. (01977) 662826, e-mail john.wint@tesco.net

Sprotbrough Flash & Don Gorge Ornithological Report: Private (C. G. Johnson); 2000-02-; H. Parkin: tel. (01302) 857684.

[*Natural History of Calderdale:* Halifax Scientific Society; 1978/79, 1984/85-99 (last).]

VC 64 (W)

The Wharfedale Naturalist: Wharfedale Naturalists' Society; 1945-2002-, formerly *Annual Review*; Wharfe catchment down to Pool, including Washburndale; Mike Atkinson: tel. (01943) 609891, e-mail mike.dorothy@btopenworld.com

Report of the Harrogate & District Naturalists' Society: [1948, 1956-57], 1958-2002-; Nidderdale, Ure valley from Masham to Boroughbridge; J. McLean: tel. (01423) 879095, e-mail joan_mcclean@hotmail.com

Annual Report of the Leeds Bird Watchers Club: 1951/52*-2001-; SE23/24/33/34/43/44, N parts of SE22/32; Peter Murphy: tel. (01132) 930188, e-mail pandbmurphy@ntlworld.com

Eccup Reservoir Report: Leeds Bird Watchers Club; 1959-61; 1984-2002-; N of Leeds; Paul Singleton: tel. (01132) 933305.

Staveley Nature Reserve Annual Report: Yorkshire Wildlife Trust; 1974-2002-; near Boroughbridge; Bob Evison: tel. (01423) 865342, e-mail the_evisons@ntlworld.com

Annual Report of the New Swillington Ings Bird Group: [1981-88], 1989-2002-; River Aire, ESE of Leeds; Nick Smith: tel. (01132) 826154.

Malham Tarn Bird Report: Private (B. Shorrock); 1990-2002-; tel. (01729) 822776.

Rodley Nature Reserve Report: Rodley NR Trust; 2000-02-; Horsforth, W of Leeds; S. A. Carson: tel. (01132) 552145.

See also Lancashire

VC 65

Annual Report of High Batts Nature Reserve: 1981-2002-; River Ure N of Ripon; Peter Bowman: tel. (01765) 676164.

WALES

Anglesey & Gwynedd

Cambrian Bird Report/Adar y Cambrian: Cambrian Ornithological Society; 1953/54-2002-; VCs 48 (Meirionnydd), 49 (Caernarfon) & 52 (Anglesey); Rhion Pritchard: tel. (01248) 671301, e-mail rhion@pritchard.freeseerve.co.uk

Bardsey Observatory Report: Bardsey Bird & Field Observatory; 1953-2002-; Steve Stansfield (Warden): tel. (07855) 264151, e-mail steve@bbfo.freeseerve.co.uk

See also Cheshire

Breconshire

Breconshire Birds: Brecknock Wildlife Trust; 1962-2001-; tel. (01874) 625708, e-mail brecknockwt@cix.co.uk

Carmarthenshire

Carmarthenshire Birds/Adar Sir Gaerfyrddin: Carmarthenshire Ornithological Recording Committee; [1967-81], 1982-2001-; Tony Forster: tel. (01558) 824237, e-mail tony-forster@supanet.com

Ceredigion

Ceredigion Bird Report/Adroddiad Adar Ceredigion: Wildlife Trust for South & West Wales; [1967-81], 1982/83-2001-; tel. (01239) 621212, e-mail wildlife@wtwww.co.uk

Clwyd

Clwyd Bird Report: Clwyd Bird Recording Group; 1974-84, 1989-93/94/95, 2000-01-; VC 50 (Denbigh) & 51 (Flint) – part of the old VC 50 was transferred to Powys in 1995, and is recorded by Montgomery; Anne Brenchley: tel. (01352) 750118, e-mail anne.brenchley@cbrgl.idps.co.uk

Annual Report of the Wrexham Birdwatchers' Society: 1981-2001-; from Wrexham along Flint coast to Point of Air; Norman Hallas: tel. (01928) 290522.

See also Cheshire

Glamorgan

Eastern Glamorgan Bird Report: Glamorgan Bird Club; [1899-1961], 1962-2001-; County Borough Councils of Bridgend, Vale of Glamorgan, Cardiff, Rhondda-Cynon-Taff, Merthyr & W Caerphilly, all within VC 41 (Glamorgan), except for parts of VC 42 (Brecon), & 35 (Monmouth); Kenfig NNR office: tel. (01656) 743386, e-mail carridg@bridgend.gov.uk

Gower Birds: Gower Ornithological Society; 1966-2001-; City & County of Swansea, Neath Port Talbot County Borough Council; Audrey Jones: tel. (01792) 298859.

Kenfig NNR Wildlife Report: Bridgend County Borough Council; 1976-92, 1998-2002-; Kenfig NNR office: tel. (01656) 743386, e-mail carridg@bridgend.gov.uk

Gwent

Gwent Bird Report: Gwent Ornithological Society; [1962-64], 1965-2001-; VC 35 (pre-1974 Monmouth), except part covered by E Glamorgan above; Jerry S. M. Lewis: tel. (01873) 855091, e-mail jerrylewis@monmouthshire.gov.uk

Montgomeryshire

Montgomeryshire Bird Report: Montgomeryshire Wildlife Trust; 1981/82, 1993/94-1998/99; tel. (01938) 555654, e-mail montwt@cix.co.uk In abeyance, could restart.

Pembrokeshire

Pembrokeshire Bird Report: Wildlife Trust for South & West Wales; [1967-81], 1981-2001-; tel. (01239) 621212, e-mail wildlife@wtwww.co.uk

The Island Naturalist: Wildlife Trust for South & West Wales; [1936-93 for Skokholm, 1960-67 for Skomer], 1994-2001-; Skokholm, Skomer; tel. (01239) 621212, e-mail wildlife@wtwww.co.uk

Radnorshire

No report since 1987 except by Bulletin.

SCOTLAND

Aberdeenshire

North-East Scotland Bird Report: North-East Scotland Bird Club; 1974-2002-; post-1995 Aberdeenshire & Aberdeen; Dave Gill: tel. (01651) 806252, e-mail dave@drakemyre.freemove.co.uk

Waders and Wildfowl on the Ythan Estuary: SNH; 1989/90-2000/1-; tel. (01738) 444177, e-mail pan.moncur@snh.gov.uk

Angus

Angus and Dundee Bird Report: SOC (Tayside); 1970/71, 1974-2002-; James Whitelaw: tel. (01382) 819391.

Argyll

Argyll Bird Report: Argyll Bird Club; 1980-2001-; post-1974 Argyll (not Bute), except area then added from Dunbarton between Loch Lomond & Loch Long, and Lochlomondside N from Tarbet to head of Loch Lomond (see Clyde); Bob Furness: tel. (01301) 702603.

Islay Bird & Natural History Report: Islay Natural History Trust; 1986-2002-; Port Charlotte, Islay PA48 7TX, e-mail fiona@islaywildlife.freemove.co.uk

Machrihanish Seabird Observatory Report: Kintyre Bird Club; 1992/93-2001-; by Campbeltown; Eddie Maguire: tel. (07919) 660292.

Ayrshire

Ayrshire Bird Report: SOC (Ayrshire); 1976-2002-; VC 75, including Ailsa Craig, Lady Isle & Horse Island; R. G. Vernon, 29 Knoll Park, Ayr KA7 4RH.

The Arran Bird Report: Isle of Arran Natural History Society; 1978-2002-; Audrey Walters: tel. (01770) 600406.

See also Clyde for Arran (which is now in N Ayrshire)

Borders

Borders Bird Report: SOC (Borders); [1932-67], 1979-2000-; Scottish Borders Region (Peebles-shire, Selkirkshire, Roxburghshire, Berwickshire); Malcolm Ross: tel. (01896) 822132, e-mail elise.ross@virgin.net

Caithness

[*Caithness Bird Report*: SOC (Caithness); c. 1975-97 (last); Stan Laybourne: tel. (01847) 841244. In abeyance, considering link with *Highland Bird Report*.]

Clyde

Clyde Birds: SOC (Clyde); [1951-58, 1973-82], 1987-2000-; Clyde catchment: S & N Lanarkshire, small part of Stirling (Endrick Water, Campsie Fells, also Carron Valley Reservoir, but see *Forth Area BR*), E & W Dunbarton, Glasgow, E Renfrewshire, Renfrewshire, Inverclyde, Loch Lomond, that part of Argyll formerly in Dunbarton from Loch Lomond W to Loch Long. Since 1994 has included separate Clyde Islands Bird Report for Bute, the Cumbraes & Arran; Jim & Valerie Wilson: tel. (01416) 392516, e-mail jim.val@btinternet.com

Lochwinnoch NR Bird Report: RSPB; 1997-99-; in Renfrewshire; tel. (01505) 842663, e-mail lochwinnoch@RSPB.org.uk In abeyance, restart considered.

Dumfries & Galloway

Birds in Dumfries and Galloway: Private (P. Collins & P. Norman); [1963-70], 1976-79, 1985-86, 1988-2001-; P. Norman: tel. (01557) 331429.

Mersehead Bird Report: 2000/01-; Mersehead Reserve: tel. (01387) 780298, e-mail dave.fairlamb@rspb.org.uk

Fife

Fife Bird Report: Fife Bird Club; 1980-2002-; mainland Fife – for islands see below & Lothian; Willie McBay: tel. (01383) 723464, e-mail wmcbay@aol.com

Isle of May Bird Observatory Report: Isle of May Bird Observatory & Field Station Trust; [1908-14, 1935-

39], 1946-2002-; David Thorne: tel. (01721) 752612, e-mail dave@thorne80.fsnet.co.uk

See also Lothian for Isle of May, Inchcolm & Inchkeith

Forth

Forth Area Bird Report: SOC (Stirling), published in *Forth Naturalist & Historian*; 1974/5-2001-; Clackmannan, Falkirk & post-1974 Stirling, except Clyde Basin (Endrick Water, etc.) & Loch Lomond. Some overlap with Clyde in Carron Valley; *Forth Naturalist & Historian*, c/o University of Stirling, Stirling FK9 4LA.

Highland

Highland Bird Report: Private (Alastair McNee); 1983-98, 2002-; Highland Region, except Nairn & Caithness, including Skye, Small Isles & Sutherland; tel. (01463) 220493, e-mail aj.mcnee@care4free.net

Sutherland Bird Review: East Sutherland Bird Group; 2001/02-2002/03-; Alan Vittery: tel. (01408) 621827.

See also Caithness, Moray & Nairn



Lothian

Lothian Bird Report: SOC (Lothian); [1968-74], 1979-2000-; West Lothian, Edinburgh, Midlothian, East Lothian; Ian Thomson: tel. (01875) 870588, e-mail imt.aberlady@ic24.net

Aberlady Bay LNR Annual Report: East Lothian Council; 1974, 1992, 1996-2000/01-2002/03-; Maree Johnston: tel. (01620) 827427, e-mail mareejohnston@eastlothian.gov.uk

Forth Island Bird Report: Forth Seabird Group; 1994-2002-; Isle of May & other islands in Lothian & Fife; David Jones, RSPB Vane Farm: tel. (01577) 862355, e-mail dave.jones@rspb.org.uk

[*West Lothian Bird Report*: West Lothian Bird Club; 1991-95, 1996-97 in *Lothian Wildlife: the West Lothian Natural History Report*, revived for 1998 (last); Alan Paterson: tel. (01506) 891544.]

Moray & Nairn

Birds in Moray and Nairn: Private (Martin Cook); 1985-2001-; post-1995 Moray & pre-1974 Nairn; tel. (01542) 850296, e-mail martin.cook9@virgin.net

Orkney

Orkney Bird Report: Orkney Bird Report Committee; 1974/75-2001-; since 1987 has included North Ronaldsay Bird Observatory Report; Jim Williams: tel. (01856) 761317, e-mail jim@geniefea.freemove.co.uk

Stronsay Bird Report: Stronsay Bird Records Committee; 1997-2002-; John Holloway: tel. (01857) 616363.

Outer Hebrides

Outer Hebrides Bird Report: Western Isles Natural History Society/Curracag; 1979-91, 1997-2001-; includes St Kilda, North Rona, Sula Sgeir, Flannans, Shiant; Andrew Stevenson: tel. (01878) 710372, e-mail andrewstevenson@barnish.fsnet.co.uk

Perth & Kinross

Perth & Kinross Bird Report: Private (Ron Youngman); 1974-81, 1988-93, 1999- can be obtained by e-mail; post-1974 Perth & Kinross; tel. (01796) 482324, e-mail blairchroisk@aol.com

Birds Recorded at Loch Leven NNR including Vane Farm RSPB Reserve: 1999-2002-; David Jones, RSPB Vane Farm: tel. (01577) 862355, e-mail dave.jones@rspb.org.uk

Shetland

Shetland Bird Report: Shetland Bird Club; 1969-2002-; Shetland except Fair Isle; Martin Heubeck: tel. (01950) 460760, e-mail martinheubeck@btinternet.com

Fair Isle Bird Observatory Report: [1948], 1949-2002- (also *Fair Isle Bird Observatory Bulletin* 1951-67); Hollie Shaw: tel. (01950) 760258, e-mail fairisle.birdobs@zetnet.co.uk

ISLE OF MAN

The Peregrine: Manx Ornithological Society; 1944-1967, 1972-2001- (some biennial); A. C. Kaye: tel. (01624) 834015.

Calf of Man Bird Observatory Annual Report: Manx National Heritage; 1964-2001-; Manx National Museum: tel. (01624) 648000, e-mail enquiries@mnh.gov.im

See also Cheshire

OFFSHORE

North Sea Bird Club Annual Report: 1979/80-2001– (some biennial); oil/gas installations & ships in North Sea & Morecambe Bay; A. Thorpe: tel. (01224) 274428, e-mail nsbc@abdn.ac.uk

CHANNEL ISLANDS

Jersey Bird Report: La Société Jersiaise; 1910-2002–; Mick Dryden: tel. (01534) 742726.

Ornithological Notes from the islands of Guernsey, Alderney & Sark: in *Report & Trans. of La Société Guernesiaise*; [1903-37], 1938-2001–; Mark Lawlor: tel. (01481) 258168, e-mail mplawlor@gtonline.net

[*Ornithological Report*: The Alderney Society; 1979/80-1998/99–; Mark Atkinson: tel. (01481) 823286. In abeyance; Alderney records are apparently not being published by Guernsey at present.]

NORTHERN IRELAND

Northern Ireland Bird Report: Northern Ireland Birdwatchers' Association; 1980/81-2000–; William McDowell: tel. (02890) 594390, e-mail williamm.mcdowell@ntlworld.com

Co. Armagh

Annual Report of the Co. Armagh Wildlife Society: 1952-2002 (new title for 2002, formerly Armagh Field Naturalists' Society); Armagh Co. Museum: tel. (02837) 523070.

Co. Down

Copeland Bird Observatory Annual Report: 1954-2001–; Neville McKee: tel. (02894) 433068, e-mail neville.mckee@btinternet.com

Acknowledgments

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David K. Ballance

Flat Two, Dunboyne, Bratton Lane, Minehead, Somerset TA24 8SQ; tel. (01643) 706820

REPUBLIC OF IRELAND

Most reports are produced by BirdWatch Ireland, Rockingham House, Newcastle, Co. Wicklow, tel. (00) 353 1 2819878, e-mail info@birdwatchireland.org For these, only e-mail addresses are given below, but other contacts can be obtained from headquarters.

Co. Cork

Annual Report of the Kilcolman NNR, Buttevant: 1969-2002–; M. Ridgway, Kilcolman Reserve, Buttevant, Co. Cork, e-mail kilcolmanbog@eircom.net

Cape Clear Bird Observatory Report: 1959-97/98 (restart intended); Oran O'Sullivan, e-mail oosullivan@birdwatchireland.org

[*Cork Bird Report*: BirdWatch Ireland; 1963-1971, 1976-1992? Long ceased.]

Cos. Dublin, Louth, Meath, Wicklow

Irish East Coast Bird Report: BirdWatch Ireland; 1980-1999–; e-mail dmurphy@birdwatchireland.org

Cos. Galway, Laois, Longford, Offaly, Roscommon, Tipperary & Westmeath

Birds in Central Ireland: Mid-Shannon Bird Report: BirdWatch Ireland; 1992/93/94/95, 1996/97/98/99– (quadrennial); Shannon catchment in these counties, e-mail sheery@eircom.net

Co. Kerry

Dingle Peninsula Bird Report: BirdWatch Ireland, Corca Dhuibhne (W. Kerry Branch); 1999/2000/01–; Dingle Peninsula W of Tralee, e-mail maclery@tinet.ie

the West Midland Bird Club; William McDowell in Northern Ireland; and Stephen Newton, Librarian of BirdWatch Ireland. Many contacts were first made through the entries in *The Birdwatcher's Yearbook*.

References

- Ballance, D. K. 2000. *Birds in Counties*. Imperial College Press, London.
— 2002. *Birds in Counties: First Supplement*. Isabelline Books, Falmouth.



Conservation research news

Compiled by Innes Sim, Ken Smith and Len Campbell



Illegal predator control on Scottish grouse moors

The conflict between raptor conservation and the maintenance of high densities of grouse for shooting interests has often led to the suggestion that illegal use of poisoned baits to control predators is more likely to occur on grouse moors than in other upland areas. This assertion has so far not been formally tested, but a recent paper has provided strong evidence that the use of illegal poisons in Scotland is disproportionately associated with grouse moors.

Using aerial photographs, Phil Whitfield and his colleagues mapped all open upland habitats in Scotland, and within these they plotted the approximate distribution of 'strip muirburn', a land-use type unique to moors managed for Red Grouse *Lagopus lagopus*. Records of illegal poisoning incidents from 1981 to 2000 were made available by the RSPB. Although strip muirburn covered some 7.7% of the estimated 37,729 km² of open upland habitats in Scotland, between 34.3 and 54.1% of upland poisoning incidents were associated with it. In other words, significantly more upland poisoning incidents were associated with strip

muirburn than would be expected by chance. This result was unlikely to be due to higher reporting rates in areas of grouse moor, since members of the public are less likely to visit these than other upland areas. In addition, there was strong evidence that the proportion of poisoning incidents associated with strip muirburn was higher during 1993-2000 than in 1981-1992.

This work shows that illegal poisoning in the Scottish uplands appears to occur disproportionately on land managed as grouse moor, and also that, although there is evidence that use of poison is declining in areas not managed for grouse, there was no such decline on grouse moors. Having highlighted the association between illegal predator control and grouse moors in Scotland, the researchers suggest that action is urgently required.

Whitfield, D. P., McLeod, D. R. A., Watson, J., Fielding, A. H., & Haworth, P. F. 2003. The association of grouse moor in Scotland with the illegal use of poisons to control predators. *Biol. Conserv.* 114: 157-163.

Roosting Common Ravens learn from their neighbours

More than 30 years ago, Ward & Zahavi (1973) suggested that communal roosts could be used as 'information centres' to help birds exploit ephemeral food sources. More recently, this has been shown to be the case for New World vultures (Cathartidae) and for small groups of juvenile Common Ravens *Corvus corax* in North America.

Closer to home, there is a huge roost of Common Ravens at Newborough Forest, on Anglesey, with counts in excess of 1,000 birds during the winter. In a remarkably ingenious

experiment, Jonathan Wright, Richard Stone and Nigel Brown have shown how unpaired Common Ravens exploit the roost as an information centre. The problem for unpaired birds is that the surrounding countryside is virtually fully occupied by territorial pairs, which will defend any sheep carcass (the main food supply) against intruders. Only by arriving in numbers can unpaired ravens displace the residents at a carcass and gain access to the food.

Wright *et al.* put out carcasses with large numbers of small, coloured plastic beads

embedded under the carcass skin, and then collected regurgitated pellets at the roost. They found that, within a day or two of putting out a carcass, a single bird in the roost would regurgitate a pellet with the plastic beads. Over the next few days, more and more birds roosting within a few metres of the original bird would produce pellets with beads in them. Furthermore, the original bird would display prominently at the roost, be dominant at the carcass and leave the roost accompanied by other ravens.

It seems that the original finder of the carcass was deliberately signalling to other birds (through its display) in order to build up sufficient numbers of co-conspirators to displace the defending territory-holders at the food. Clever, eh?

Ward, P., & Zahavi, A. 1973. The importance of certain assemblages of birds as 'information centres' for food finding. *Ibis* 117: 517-534.

Wright, J., Stone, R. E., & Brown, N. 2003. Communal roosts as structured information centres in the Raven *Corvus corax*. *J. Anim. Ecol.* 72: 1003-1014.

Is it safe to fit transmitters to albatrosses?

However far-sighted they may have been, it is unlikely that the pioneers who set up the first proper ringing scheme, in Britain almost 100 years ago, could ever have imagined the amazing range of techniques and equipment now available to those studying the movements of birds. Although radio transmitters have been used to study bird movements in detail within small areas for more than 30 years, the introduction of microchip and satellite technology now means that it is possible to follow birds more or less continuously, for months at a time, over huge areas almost anywhere in the world.

The enthusiasm to exploit these opportunities must, however, be tempered by the knowledge that catching birds and attaching transmitters to them may have a negative impact on the handled bird. Researchers have to assess carefully whether the value of the extra information gained for the conservation of the species outweighs any deleterious impact that attaching a device may have on the tagged individual – and perhaps its population as a whole. In a recent paper, Richard Phillips and his colleagues at the British Antarctic Survey point out that the use of satellite transmitters has revolutionised the study of pelagic seabirds, particularly those affected by commercial fisheries. While the impact of attaching devices has been well assessed for penguins, however, the effect of transmitters on flying seabirds has received less attention from researchers.

Phillips *et al.* (2003) studied Black-browed *Thalassarche melanophris* and Grey-headed Albatrosses *T. chrysostoma* on South Georgia and found that, overall, there was no significant difference in trip duration, meal mass, breeding success or return rates in subsequent years

between birds carrying transmitters and those without. A review of other comparable studies of albatrosses and petrels suggested, however, that extended trip duration and, in some cases, high nest desertion rates were actually quite common. The authors identified several key factors which appear to be particularly associated with such negative effects. First, the total load of attached devices should be kept to no more than 3% of the bird's mass, rather than 5% – a widespread, but arbitrarily selected, threshold dating back to the 1970s. Second, using harnesses on such seabirds appeared to have no apparent effect in some studies but was associated with high levels of breeding failure in others. It was also clear that every effort must be made to minimise the amount of time these birds are handled, and to avoid carrying out such activities at sensitive times, such as during incubation.

The authors' own recommendations deal with the specifics of when and how to use such devices on this group of seabirds, and in particular suggest that harnesses should not be used until better designs and materials are available. More generally, their work confirms that, when backed up by careful monitoring of any impact, attaching transmitters is an acceptable technique which can be used safely to study difficult and threatened species such as albatrosses. Equally, if not used with care, these techniques could further reduce breeding success and add to the problems already faced by the target species. In such cases, the data obtained would clearly be of questionable value.

Phillips, R. A., Xavier, J. C., & Croxall, J. P. 2003. Effects of satellite transmitters on albatrosses and petrels. *Auk* 120: 1082-1090.

PhotoSpot

Hawk Owl and Great Grey Owl

Highly sought-after by European birders, both Hawk Owl *Surnia ulula* and Great Grey Owl *Strix nebulosa* can be two of the most difficult owls to find in Scandinavia during years when their populations are low. Both species are linked to fluctuations in vole *Microtus* populations, but the Oulu region in Finland has recently experienced a steady increase in vole numbers, leading to excellent owl years in 2002 and 2003.

Until last year, I had seen many individuals of both species during visits to Finland, but had never had a good opportunity to photograph either. This all changed during February 2003, when my Finnish friend Jari Peltomäki alerted me to some outstanding photographic opportunities with these two species of owl.

The accompanying photos were all taken on

the same day, in the Oulu region of Finland, before the birds had settled down to breed, and while there was still up to a metre of snow lying in the forests.

In 2003, there were tens of pairs of Great Grey Owls nesting south of Oulu, while the normally scarce Hawk Owl was a widespread breeder in the region. Both Pygmy *Glaucidium passerinum* and Ural Owls *S. uralensis* also had a record-breaking breeding season. It is expected that the vole populations on which the owls depend will crash in the southern part of the area, but vole numbers are still increasing to the north and east of Oulu, so 2004 once more promises to be a productive year for owls.

My thanks go to Jari Peltomäki of Finnature, as without his advice these pictures would never have been taken.

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40 & 41. Hawk Owl *Surnia ulula*; 42 & 43. Great Grey Owl *Strix nebulosa*.
All photos taken near Oulu, Finland, February 2003. David Tipling/Windrush





Notes

Juvenile Shag on Skomer showing characteristics of Mediterranean race

A juvenile Shag *Phalacrocorax aristotelis* with strikingly whitish underparts and pale legs and feet appeared at North Haven, Skomer Island, Pembrokeshire, on 3rd September 2002, and remained for the rest of the autumn (at least until wardening staff vacated the island in late November). I had seen another juvenile Shag displaying similarly distinctive plumage on Skomer on 4th September 1999 (seen just once, from a boat), and concluded that it showed similarities to the Mediterranean race *desmarestii*. Other records of juvenile Shags showing characteristics of *desmarestii* in southwest Britain were discussed by Flumm (1993). Having formerly spent two seasons on the Farne Islands, Northumberland, and two seasons on Shetland, I had previously seen many thousands of juvenile Shags, and not one exhibited such distinctive white underparts, with the exception of a pure albino on the Farnes.

On 20th March 2003, the corpse of an immature Shag with white underparts was washed up at North Haven, Skomer. This is highly likely to have been the individual seen the previous autumn. Careful measurements seemed to rule out the possibility of it being of the race *desmarestii*. The wing length, 271 mm, was at the upper end of the range given in *BWP* for male *desmarestii*, but average for a male *aristotelis* (see table 1). More crucially, the bill length of 55.1 mm was too short for *desmarestii* (minimum 58 mm, *BWP*) but close to the mean for *aristotelis*. The northwest African race *riggenbachi* 'combines body size and colour of bare parts of *P. a. desmarestii* with bill dimensions of nominate *aristotelis*' (*BWP*), so the

Skomer bird was probably too big to belong to this form.

Description

(from corpse, with additional field notes)

Upperparts Flight feathers fresh, dark greenish-brown (though inner four primaries more brown). Primary coverts fresh, dark greenish-brown. Alula feathers faded pale cream with small brown centres. Wing-coverts and scapulars worn with creamy-buff edges. This produced a pale panel on the wings in the field, with a distinctive lower pale border on the greater coverts. Alula fresh. Dark brown crown and nape. Dark, greenish-brown mantle, rump and tail.

Underparts Whitish throat and centre of neck, suffusing to brown on neck sides. Whitish belly. Brown feather shafts and varying suffusion, particularly on flanks and breast (producing two dark patches on lower flanks; see plate 44). Vent area white. Undertail-coverts sullied brownish. Thighs dark greenish-brown.

Legs and feet Pale flesh-yellow (possibly more pinkish on live bird). Darker on outer edge of webbing. Dark rear edge of legs and 'dirty' undersides of feet.

Bill Pale horn at tip, dark horn culmen, pinkish lower mandible suffusing to yellow on basal half, with yellow-orange gape.

It seems that juvenile Shags with whitish underparts and pale legs and feet belonging to the nominate race *aristotelis* do occur in Britain,

Table 1. Wing length, bill length (from feathering at side), and bill depth (minimum) measurements of Shags *Phalacrocorax aristotelis* of subspecies *aristotelis* (from southwest England) and *desmarestii*, and of a corpse on Skomer Island, Pembrokeshire, in March 2003 (see text). Figures show mean (range, n); all measurements in millimetres. Published data from *BWP*.

	<i>aristotelis</i>	<i>desmarestii</i>	Skomer bird
Wing length (male)	271 (261-278, 12)	258 (243-271, 12)	271
Wing length (female)	258 (251-269, 18)	249 (240-265, 11)	
Bill length (male)	55.7 (53-58, 10)	60.9 (58-65, 6)	55.1
Bill length (female)	56.2 (55-58, 5)	63.2 (61-65, 5)	
Bill depth (male)	10.5 (10.2-11.0, 5)	10.0 (9.7-10.6, 5)	10.1
Bill depth (female)	9.2 (8.3-10.4, 14)	8.7 (8.2-9.3, 5)	

Juan G. Brown



Juan G. Brown



Juan G. Brown

44-46. Juvenile Shag *Phalacrocorax aristotelis* with distinctive whitish underparts resembling the Mediterranean race *desmarestii*, Skomer, Pembrokeshire, November 2002 (live), March 2003 (dead).

and the measurements of the Skomer bird reinforce the similar conclusions reached by Flumm (1993). With documented records of other birds showing these characteristics (though some with whiter underparts and upperwing-coverts and brighter bare parts than the Skomer bird) in Devon and Cornwall (Flumm 1993), these morphological traits may be more prevalent in southwest British populations. Pierre Yésou (*in*

litt) has commented that such plumage is also shown by a few juvenile Shags in Brittany, western France and that, although no statistics are available, they are perhaps not particularly rare.

Reference

Flumm, D. S. 1993. Do Mediterranean Shags occur in southwest England? *Brit. Birds* 86: 166-173.

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Pink coloration on Eurasian Spoonbills

Small numbers of Eurasian Spoonbills *Platalea leucorodia* occur regularly in winter in the Canary Islands, and those which arrive as juveniles often remain on the islands for at least two winters. On some juveniles (usually just single birds, but on one occasion two from a party of six), I have noticed a pink coloration, particularly around the base of the mandibles, roughly coinciding with the bare skin area and the feathering between the eyes. Typically, this colour changes to orange and then yellow/white. The initial colour is similar to (but much more intense than) the pink suffu-

sion that may occur on the breast of Black-headed Gulls *Larus ridibundus*. On the spoonbills, odd patches may appear also on the lower to middle neck, the middle of the back, and occasionally on the secondaries or the tail. The appearance of the colour seems to coincide with the change in eye colour from that of a juvenile to that of an adult, and usually takes place during the second winter (second/third calendar-year). My impression is that the colour is due to an exudate which might originate on the face, or possibly from the preening gland. I am unaware of any references to this phenomenon.

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Hobby plucking House Martin prey in flight

East Hyde is an area of water meadow stretching along a short length of the Upper Lea Valley, on the Hertfordshire/Bedfordshire border. Hobbies *Falco subbuteo* visit this area in most summers and can be seen hunting regularly over the river and adjacent arable farmland between late May and August. A plentiful supply of damselflies and dragonflies (Odonata) is found around the meadow, but a House Martin *Delichon urbicum* colony at a nearby farm also attracts the Hobbies. Normally, any martins which fall prey to the falcons are taken away to a favoured perch to be

plucked and devoured at leisure. At about midday on 30th June 2002, however, an adult Hobby stooped dramatically, caught a House Martin and then proceeded to soar above my car (which was parked close to the martins' colony). During the ensuing ten minutes, the Hobby proceeded to pluck its prey during mid soar. Following each ripping head movement, a delicate shower of feathers would rain down; these were soon followed by at least one wing and leg. I can find no reference in the literature to Hobbies plucking bird prey in flight.

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Woodcock feeding young

In *BWP*, only one description of a wild Woodcock *Scolopax rusticola* feeding young bill-to-bill is noted. On 29th June 1989, from a window at the address below, E. Allan and I watched one do so under trees only 6 m away from the building. Accompanied by two feathered, almost full-grown young, the adult probed its bill well down into the ground about once per

second. The young probed at a lesser rate, but all three found food and ate it. During the ten-minute period when we could see them, one chick at a time came to the adult and followed it, finding food for itself by probing, but at least four times (for each chick) taking and eating food from the adult's bill.

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EDITORIAL COMMENT Although *BWP* mentions just one observation of wild Woodcocks feeding young, it provides other records involving captive birds. Young in captivity are described as being food dependent at first, normally achieving self-feeding at around 7-13 days. *Handbuch der Vögel Mitteleuropas* states that: 'When searching for food the female appears to help the chicks, inasmuch as she turns over leaves with the bill and shows prey items. As the young cannot probe to begin with, they are shown food items entirely on the surface. In captivity, newly hatched chicks are at first not able to feed without help, but... after 3 hours are picking up small worms independently as long as these move, or are pointed out with a stick.'

This seems to suggest that Woodcocks may, at least occasionally, feed their young, if only for a brief period after hatching; but that few people have observed them do so. Adam Watson's note makes it clear that parental feeding can involve not just small hatchlings but well-grown young which are by then able to forage for themselves.

Tail pattern of Oriental Turtle Dove

Two subspecies of Oriental Turtle Dove *Streptopelia orientalis* have occurred as vagrants to western Europe: the nominate *S. o. orientalis* (hereafter 'orientalis') and the western form *S. o.*

meena (hereafter 'meena'). Their separation has been discussed in detail by Hirschfeld (1992) and Harris *et al.* (1996), both of whom emphasised the colour of the tail tip as a useful feature

when separating the two in the field. For example, Hirschfeld (1992) stated that (like Turtle Dove *S. turtur*) *meena* often has white tips to the tail feathers, whereas *orientalis* always has grey tips to the tail. Gibbs *et al.* (2001) and Harris *et al.* (1996) described similar distinctions between the two forms of Oriental Turtle Dove, and this has recently been reinforced by Wilson & Korovin (2003) and comments in Rogers *et al.* (2003).

My experience of *orientalis* in Hong Kong and northeast China has, however, shown that, as with *meena*, the colour of the tail tip is variable, ranging from white to dull grey (plates 47–50). Given such variation, I believe that colour of the tail tip should be used only as a supporting character when separating the two taxa. The pattern of the outer tail feather has also been suggested as a useful feature for separating *orientalis* and *meena* (Hirschfeld 1992; Harris *et al.* 1996). As can be seen in plates 47 & 48, however, the intrusion of black onto the outer web of the outermost tail feather in *orientalis* is also variable, and can be poorly defined, approaching that described for *meena*, or even

Turtle Dove. Fortunately, the separation of *orientalis* and *meena* remains relatively straightforward, based on a combination of other features as described by Hirschfeld (1992) and Harris *et al.* (1996), but especially size and structure.

One other point of interest is the moult pattern of the recent Oriental Turtle Dove (*meena*) on Orkney in late 2002 (*Brit. Birds* 96: plates 32, 171 & 172; Rogers *et al.* 2003). This individual, which was still largely in juvenile plumage in December, showed a particularly retarded moult compared with first-winter *orientalis*. Similarly, photographs of the only other accepted record of *meena* in Britain, at Spurn, East Yorkshire, on 8th November 1975, also show a mixture of retained juvenile scapulars, coverts and tertials and contrastingly fresh first-winter feathers (*Brit. Birds* 70: 448; Vinicombe & Cottridge 1996). In southern China at the same time of year, first-winter *orientalis* would typically have replaced almost all wing-coverts and tertials. Further research into the timing of the post-juvenile moult in the two subspecies of Oriental Turtle Dove could prove worthwhile.



Paul J. Leader

47. Oriental Turtle Dove *Streptopelia orientalis orientalis*, probably first-summer, Hong Kong, China, 15th April 2000.



Paul J. Leader

48. First-winter Oriental Turtle Dove *Streptopelia orientalis orientalis*, Hong Kong, China, 1st February 2002.



Paul J. Leader

49. First-winter Oriental Turtle Dove *Streptopelia orientalis orientalis*, Hong Kong, China, 5th February 2000.



Paul J. Leader

50. First-winter Oriental Turtle Dove *Streptopelia orientalis orientalis*, with outermost tail feather missing, Hong Kong, China, 1st February 2002.

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Kleptoparasitism between owl species

At about 19.30 hrs on 20th June 2002, I was watching distant Long-eared Owls *Asio otus* at Druridge Pools in Northumberland. While doing so, a Barn Owl *Tyto alba* flew through my line of sight carrying a Bank Vole *Clethrionomys glareolus*-sized prey item. I followed the Barn Owl's progress across the reserve towards a barn, about 1 km away, where I knew it was nesting. About 150 m before the barn, a Short-eared Owl *Asio flammeus* flew up from the ground, close to a hedge, and snatched the prey item from the Barn Owl. The Short-eared Owl attacked from below, taking the prey from the clutches of its victim in an instant; once seized,

it flew back down to the ground with its prize. The Barn Owl turned and flew back in the direction from which it had come.

Short-eared Owls are known to be kleptoparasitic (BWP; Brockman & Barnard 1979); but neither of the preceding references mentions Barn Owl as the host. They are, however, known to take food from Common Kestrels *Falco tinnunculus*.

Reference

- Brockman, H. J., & Barnard, C. J. 1979. Kleptoparasitism in birds. *Anim. Behav.* 27: 487-514.

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Male Blackbird defending Holly fruits

Some birds are able to switch from non-aggressive social foraging to the defence of a food source. This ability, which may in fact be widespread in birds, has so far been investigated mainly in nectar- and fruit-eaters; even so, relatively few instances of birds defending fruits have been recorded. Snow & Snow (1988) described in detail the defence of Holly *Ilex aquifolium* trees by Mistle Thrushes *Turdus viscivorus*, in which single birds or pairs prevented other birds from feeding on the fruit and were thus able to conserve a long-term food supply. This note describes a male Blackbird *T. merula* defending a fruiting Holly tree.

Observations were carried out in Oxfordshire on four Holly trees which Blackbirds and Redwings *T. iliacus* had been seen visiting to feed on the fruits. The trees were observed from October 1989 to January 1990. One tree was

defended by a male Blackbird, easily recognised individually since one of the feathers on its right wing was white. Each visit by an individual bird was recorded as a feeding visit if the bird was seen to eat, or try to eat, at least one fruit. Meal size (number of fruits eaten), any interactions between the defender and the other birds feeding on the tree and, where possible, excretion of seeds (either by regurgitation or defecation) were recorded for each feeding visit.

Table 1 summarises the observations on this tree, covering a total of two and a half hours. Mean meal size of the defender and female Blackbirds were similar, while that of male Blackbirds was smaller than the defender's. The difference in meal size between the defender and all other Blackbirds was not significant, however. Females were less often chased by the defender, compared with male Blackbirds and

Table 1. Observations on the foraging behaviour of Blackbirds *Turdus merula* and Redwings *T. iliacus* feeding on fruits of a Holly *Ilex aquifolium* tree defended by a male Blackbird, Oxfordshire, winter 1989/90.

	Blackbird defender	Female Blackbirds	Male Blackbirds	Redwings
No. feeding visits	13	5	19	2
Meal size – no. berries: (mean, \pm SE, n)	6.7 (\pm 4.5, 3)	7.0 (\pm 1.6, 4)	3.7 (\pm 3.1, 10)	18 (n=1)
Visits when chased by defender (%)	–	20	88	100
Total fruits eaten by (%)	19	27	36	18

Redwings. The total number of fruits taken by all intruders combined was significantly higher than the number taken by the defender (81% compared with 19%, respectively).

We are not aware that defence of a Holly tree by a male Blackbird in this way has been documented before. The only comparable case is that of a female Blackbird which defended a Holly temporarily after it had been abandoned by a defending Mistle Thrush (Snow & Snow 1988). Some territorial adult Blackbirds, both males and females, may defend fruit sources within their territories during the winter, but compared with Mistle Thrushes they show a less developed form of this defence behaviour. It seems that the male Blackbird we observed was not really able to prevent other birds from feeding on the defended tree: the mean number of fruits eaten by an intruder (of any species) per visit in the defended tree was found to be 6.4 ± 4.3 (n=13), compared with 5.4 ± 4.3 (n=10) for undefended trees. This might be explained by the Blackbird's size, which is a key factor for dominance: Blackbirds are in the middle of the size range of the five thrushes (Mistle Thrushes and Fieldfares *T. pilaris* being larger and Song Thrushes *T.*

philomelos and Redwings smaller) which occur in the area. Consequently, even though Blackbirds are dominant over both Song Thrushes and Redwings, they are not regarded as specialists in the defence of a winter food supply.

The finding that the total number of fruits taken by intruders is about four times that consumed by the defender has implications for seed dispersal. Our observations showed that the defender excretes most of the seeds consumed underneath the parent plant, and thus fails to disperse them. The seeds of fruits taken by intruders are mostly excreted elsewhere, thus assisting the plant's dispersal.

Acknowledgments

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Common Chaffinch feeding on road kills

I was interested to read Philip Radford's note, 'Common Chaffinch eating flesh of juvenile Blackbird' (*Brit. Birds* 96: 91). During January 2003, I observed similar behaviour by Common Chaffinches *Fringilla coelebs* in New Zealand, where the species was introduced in the nineteenth century and is now abundant throughout the mainland and on offshore

islands. On several occasions, and in various parts of New Zealand, I saw Common Chaffinches feeding on the bodies of freshly killed possums (*Trichosurus* spp.) which had been hit by road traffic. Possums, which are introduced Australian marsupials, are extremely common in New Zealand.

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Reviews

HANDBOOK OF THE BIRDS OF THE WORLD. VOL. 8. BROADBILLS TO TAPACULOS

Edited by Josep del Hoyo, Andrew Elliott & David A. Christie. Lynx Edicions, Barcelona, 2003. 845 pages; 81 colour plates; numerous distribution maps and photographs. ISBN 84-87334-50-4. Hardback, £120.00.

The cloacal temperature of the little-known Hooded Gnateater *Conopophaga roberti* was once found to be 39.8°C. You will learn much more from this volume than to beware of scientists carrying thermometers. It is not for such gems of ornithological trivia that this tome is so memorable, but rather the comprehensive accounts of both the families and species which make up Volume 8.

This marks the start of the passerines, and what a bunch they are! Anyone who has visited the tropics will have searched hard, and often long, for the broadbills (Eurylaimidae), asities (Philepittidae), pittas (Pittidae), ovenbirds (Furnariidae), antbirds (Thamnophilidae) and tapaculos (Rhino-cryptidae), which contain some of the lister's most prized birds. This volume contains all one could wish to know about any of these birds except which bush it is in.

It is doubtful whether the writings of so many pre-eminent field ornithologists have ever occurred together within the covers of a single book. Their wealth of

knowledge and experience pours from every page. To fill this many pages in such an informative manner, about so many aspects of the lives of these often rare and secretive species, further emphasises the skills of all contributors and their colleagues. Having once spent an hour in bamboo (Poaceae) with an *Automolus* foliage-gleaner and failed to even discover its name, my admiration for all their efforts knows no bounds.

Volume 8 follows the same formula as the previous seven: an introduction to the family followed by the species accounts, both of which are divided into pre-determined sections. The essay on food and feeding of the Thamnophilidae is just one of many that makes compulsive reading. Such a rigid approach may not always be necessary. For example, we read in the movement section in the introduction to the Rhinocryptidae that 'all tapaculos are entirely resident'. Do we then need to have 55 movement sections in the species accounts stating 'sedentary'? There are similar examples, taking up space that might have been better used.

The illustrations, as one would expect, vary in quality, usually between good and excellent. Many are the best I have seen of a species and some of the Furnariidae are simply sumptuous. There are exceptions (for example, I do not like the Restinga Antwren *Formicivora littoralis*) and I would have loved to have seen the two genera of ant-thrushes (*Formicarius* and *Chamaeza*) on separate plates – if only to increase drooling time. The photographs too, however they

HANDBOOK OF THE BIRDS OF THE WORLD

Volume 8
Broadbills
to
Tapaculos



were obtained, are often of the highest quality, considering how hard some of these birds are just to see. So up-to-date in all aspects is this volume that it even includes the first published photographs of some species.

Transcribing bird songs and calls is no easy task. While I am sure that the described song of the Chucao Tapaculo *Scelorchilus rubecula* is technically correct, it does not evoke the ringing onomatopoeic sound familiar to anyone who has ever stood in a central Chilean forest. A more human, less scientific approach can be just as meaningful (and is used for many other species).

That these criticisms are largely unimportant is testimony to another near-faultless effort. The previous seven volumes in this series have rightly amassed a plethora of rave reviews and all the good things apply here as well. This volume is exactly as one would have expected – magnificent.

Richard Schofield

BIRD SOUNDS OF EUROPE & NORTHWEST AFRICA

By Jean C. Roché & Jérôme Chevereau. WildSounds, Norfolk, 2002. Ten CDs and a 44-page booklet. £69.95.

For many years, the collection of songs and calls by Jean C. Roché (1993), issued on four CDs or cassette tapes, has been the best-selling sound guide to most European birds. In 2002, however, WildSounds published an updated series of recordings, compiled by

Jean Roché and Jérôme Chevereau on ten CDs, which looks set to establish a new standard. This new publication builds upon the original recordings by expanding the scope into northwest Africa, including many of the omitted European species and adding in

some recent splits. The main difference from the four-CD set, apart from the expanded geographical area, is that this new collection contains more material per species. Unfortunately, this additional space has not been used wisely. Instead, we are treated to more of what we heard on the original production, with much of this additional space being devoted to songs rather than calls, although additional examples of songs are sometimes included.

The larger geographical area covered means that many, but by no means all, interesting taxa from northwest Africa are treated, along with the Icelandic specialities. Within the core area of western Europe, all the native and regular breeding species, including several introduced species, are covered, apart from Madeiran Storm-petrel *Oceanodroma castro*, which breeds in autumn just off the Portuguese coast. Towards the eastern limits of Europe, the decision to include or omit species appears somewhat random; for example, Pied Wheatear *Oenanthe pleschanka* and Paddyfield Warbler *Acrocephalus agricola* are included but Pallid Harrier *Circus macrourus*, Steppe Eagle *Aquila nipalensis* and Citrine Wagtail *Motacilla citreola* are not. Other exclusions include all Macaronesian species, the specialities and endemics of the Caucasus, and many vagrants to Europe.

An average of just over one minute is devoted to each species, and the recordings are generally good quality mono. Some recordings are over-filtered, e.g. Hazel Grouse *Bonasa bonasia* and Black Guillemot *Cephus grylle*, and the volume is nearly always loud regardless of whether the original sound was. For example, a male Egyptian Nightjar *Caprimulgus aegyptius* with 'very weak calls' is nevertheless presented at full volume. A small number of recordings are surprisingly poor, including those of Oystercatcher *Haematopus ostralegus* and a large flock of Red Knot *Calidris canutus*. On the other hand, some high-

lights deserve a special mention, either for their quality or because of the rarity of the recording. For me, these include Black Stork *Ciconia nigra* at the nest and in flight; Small Button-quail *Turnix sylvatica* (in another publication I read that this was recorded near Oualidia, Morocco, presumably long ago); Great Bustard *Otis tarda* (amazing!); Jack Snipe *Lymnocyrtes minimus* display; Pomarine Skua *Stercorarius pomarinus*; the owls, in particular Eagle Owl *Bubo bubo*; Hoopoe Lark *Alaemon alaudipes*; plus the songs of Dipper *Cinclus cinclus*, Wallcreeper *Tichodroma muraria* and Desert Sparrow *Passer simplex*. Names are not announced, but the user can easily look them up based on track number. Indeed, WildSounds are to be congratulated for a simple and effective means of selecting a particular species. Each CD comes in its own colour-coded cardboard sleeve to match the disk, and the sleeves have a track index on one side and an alphabetical index on the other. In the accompanying booklet, it is easy to find the species notes quickly.

A major and recurrent criticism of many CDs is the poor documentation supplied. Unfortunately, this collection is no different, and the lack of date and location data severely limits its value. This makes it difficult or impossible to say which taxon or geographical population a particular vocalisation belongs to. While it would be unfair to expect the authors to anticipate every taxonomic change, information about the provenance of the recordings would have made the CDs much more useful to the many users who are interested in systematics. Vocalisations often form a key part of the basis of the decision to split taxa, and this collection contains several examples of taxa which have already been split by some authorities. Examples include (for some I indicate the taxon actually heard on the CD in parentheses): Bean Goose *Anser fabalis*; Cory's Shearwater *Calonectris diomedea* (subspecies

diomedea, not *borealis*); Yelkouan Shearwater *Puffinus yelkouan*; Yellow-legged Gull *Larus cachinnans* (*michahellis/atlantis*, not *cachinnans*); Three-toed Woodpecker *Picoides tridactylus*; Yellow Wagtail *Motacilla flava* (includes both southern and northern taxa); Black-eared Wheatear *Oenanthe hispanica*; 'olivaceous warbler' (songs of both *Hippolais pallida* and *H. opaca* are given, but the calls are left unidentified); Marmora's Warbler *Sylvia sarda* (subspecies *sarda*, not *balearica*); Subalpine Warbler *S. cantillans*; 'Bonelli's warbler' (the calls at least are *Phylloscopus bonelli*, not *P. orientalis*); Pied Flycatcher *Ficedula hypoleuca*; Blue Tit *Parus caeruleus*; Citril Finch *Serinus citrinella*; and Common Redpoll *Carduelis flammea*. The above list is not exhaustive, and one could name several other taxa which may be split in the future. The news is not all bad for those interested in systematics though, since a number of interesting North African taxa are included, such as endemic populations of Tawny Owl (*Strix aluco mauritanica*), Black-billed Magpie (*Pica pica manretanica*) and Common Chaffinch (*Fringilla coelebs spodiogenys*).

The inclusion of dates would have enabled the user to draw a distinction between calls limited to the breeding season and those which can be heard throughout the year. In fact, it would have been helpful to include separate tracks for songs and calls, or breeding-season and year-round vocalisations. Given that there are generally about 50 tracks per CD, this would not have been difficult to achieve, with the material being spread over a potential 99 tracks per CD. Regrettably, quite a few species on the CDs which are most frequently observed on migration by European birdwatchers, or during the winter months, are represented in this collection by sounds almost entirely limited to the breeding grounds. The Lapland Bunting *Calcarinus lapponicus* track includes two minutes of song and calls from

the breeding grounds, while the characteristic rattling call given by migrant and wintering birds is omitted. Wader sounds on the CDs are almost entirely restricted to displays and alarm calls from the breeding grounds, and the typical migration calls of Curlew Sandpiper *Calidris ferruginea*, Broad-billed Sandpiper *Limicola falcinellus* and Terek Sandpiper *Xenus cinereus* are all missing.

Having listened carefully to all ten CDs, I discovered quite a number of misidentified sounds, wrongly described sounds and anomalies. Given that this work is a much-consulted reference for bird sound material, it is important that these are identified. Unfortunately, space prevents their inclusion here but this review will appear in full, along with a list of anomalies, on the *British Birds* website at www.britishbirds.co.uk

Given the number of errors and the scant and often misleading documentation, I suggest that this

publication is of fairly limited value as a work of reference. Given the generally good quality of the recordings, and the inclusion of many interesting and rarely heard vocalisations, a thoroughly revised edition with mistakes corrected and detailed documentation could still turn this into a useful reference.

So what alternatives can we turn to? A new German collection by Schulze (2003) contains an incredible 819 species on 17 CDs, covering the entire Western Palearctic region. The text is in German, but scientific names are included, making the CDs accessible to all. Unfortunately, the text contains many of the limitations found in Roché & Chevereau. Chappuis (2000) deals primarily with recordings of North African bird sounds, but is a useful reference to the majority of southern European species, along with many migratory species from western Europe. Made in collaboration

with the British Library, the month, country and name of the recordist are listed. Most of the text is in French, but species' names and introductory texts are in English.

It is to be hoped that future publishers of bird sound recordings will take note of the limitations of the Roché & Chevereau compilation and include, as a minimum, the date and location of the recording, and the name of the sound recordist.

Chappuis, C. 2000. *Oiseaux d'Afrique – I Sahara, Maghreb, Madère, Canaries & Iles du Cap-Vert*. Société d'Études Ornithologiques de France, Paris.

Roché, J. C. 1993. *All the bird songs of Britain and Europe on 4 CDs*. Sittelle, Mens.

Schulze, A. 2003. *Die Vogelstimmen Europas, Nordafrikas und Vorderasiens*. Musikverlag edition. Ample, Germering.

Magnus S. Robb

DIE KREUZSCHNÄBEL: GATTUNG LOXIA

By H. Münch.

Westarp Wissenschaften,
Hohenwarsleben, 2003.

311 pages; 4 colour plates;
67 figures; 13 tables.

ISBN 3-89432-4422.

Paperback, £35.50

With their at times spectacular irruptions, peculiar diet and feeding methods (and correspondingly unique bill morphology), their attractive plumage colours and far-carrying calls, the crossbills *Loxia* have aroused interest and excitement over centuries. This book, volume 634 in the German-language 'New Brehm Library'

series, provides a comprehensive review of the literature on these remarkable finches and incorporates data from the author's own studies, mainly in eastern Germany.

Following general chapters on morphology and anatomy, phylogeny and taxonomy come detailed descriptions of all four crossbill species, including the 21 (!) races of Common (Red) Crossbill *L. curvirostra*, with sections covering distribution, plumages, racial classification, voice, movements, habitat, breeding biology, behaviour, food and feeding methods, etc.

Summaries of three important 2002 papers (*Brit. Birds* 95: 4-11; *Ibis* 144: 383-410 and 494-508)

would undoubtedly have added much and enlivened the debate in *Die Kreuzschnäbel* on status, morphological and vocal differences in Common Crossbill (of which there may be more than one species in Britain), Scottish Crossbill *L. scotica*, and Parrot Crossbill *L. pytyopsittacus* (now known to be breeding regularly in Scotland, locally even the most abundant of the three species), but the papers must have come too late for this monograph.

Hans Münch's detailed text also deserves to be enlivened with a richer selection of higher-quality illustrations than those presented in the book.

M. G. Wilson

WHERE TO WATCH BIRDS IN BRITAIN

By Simon Harrap and Nigel Redman. Christopher Helm, A&C Black, London, 2003.

624 pages; 16 colour plates, many line-drawings; over 240 maps.

ISBN 0-7136-4137-1.

Paperback, £19.99.

In reviewing this book, my mind was cast back to two of the originals in this field: James Fisher's *Shell Nature Lover's Atlas* from 1966; and, probably the first book devoted to birding sites, John Gooders' *Where to Watch Birds* from 1967. The book under review, itself based on *Birdwatching in Britain: a Site by Site Guide*, published in 1987, has come a long way since then, reflecting a lot of the changes that have taken place with the hobby itself. Comparing the index of Gooders' with this book, it is interesting to see that almost 60% of the sites covered by the former have either disappeared (alas no Wisbech sewage farm in Cambridgeshire these days), or are considered no longer to be worthy entries. Over 440 'sites' are covered here (many of which I had never heard of, let alone known how to get to), with sometimes a long stretch of coastline, or a whole

island treated as a single 'site'. The book is split into seven regions, with 60 sites for southeast England, 53 for Wales, 57 for southwest England, 53 for East Anglia, 51 for northern England, 60 for central England, and 104 for Scotland. Each site entry covers habitat, access arrangements (in a responsible manner), birds, and useful contact information. Even for well-known sites, such as Spurn, East Yorkshire, there are tips on the best areas to search; while the maps, over 240 of them, with many covering more than one site, are clear, helpful and concise. Access instructions assume that a car is available (does *anyone* twitch by public transport these days?), but there is no mention of those sites which have access for disabled birders.

To see how accurate the bird information is, I checked some of the sites in Bedfordshire well known to me. While some of the site details are realistic, others are distinctly out of date. For example, at The Lodge, Sandy, Hawfinch *Coccothraustes coccothraustes* is described as 'occasional' but the last published record there was five years ago. Similarly, for Harrold Odell Country Park, where 'sometimes Bittern [*Botaurus stellaris*] and Bearded Tit [*Panurus biarmicus*] are occasionally recorded', the former has been recorded there only in 1991, and the latter only in 1977 and 1984 –



hardly 'occasional' whatever interpretation you use – and Willow Tit *Parus montanus* certainly does not breed, and has not done so for several years, contrary to what is claimed.

These criticisms aside, this book does contain a huge amount of useful information and I recommend it highly to all those of us that holiday in Britain away from our normal range, or want to bird-watch somewhere unfamiliar, and to those birders travelling here from abroad. My copy will be stowed in the car, readily available for regular use.

Barry Nightingale

ADOBE PHOTOSHOP ALBUM 2.0

Adobe Systems
Incorporated, 2003.
£39.99.

With the digital photography age now firmly upon us, the requirement to process, store and find digital images has never been greater. Photoshop Album 2.0 is far from being the first program for previewing, retrieving, retouching, and publishing images, but if you need a versatile way to organise images, it appears to be worth its weight in gold.

Until discovering this software I

had relied on the painstakingly slow Windows XP preview panes to preview images stored either on removable drives or from 'fresh stock' on recently filled memory cards. Enter Album 2.0. Running the software on a Pentium P4 laptop with 1,024MB of RAM and Windows XP as the operating platform, this software immediately took previewing images to impressive heights. The speed at which it imported images (without moving them from their original location), either from memory cards or external and/or internal drives, was impressive to say the least.

Once the images were in the 'well', I had the option of viewing

them in bulk or as full-screen images, which makes editing a comparable joy. I also had the facility to rename and retouch images, but the latter feature cannot match full-version Photoshop, which is still the 'daddy' of image editing software. One major snag is that Album 2.0 assumes that you are not going to change the folder structure in which your images are stored, or indeed the file names. If you do so, the software will recognise the broken links and prompt you to fix them. Great in principle, but extremely tedious to fix! As with most software packages, there are a few extras thrown in for good value, and Album 2.0

includes wizards which allow you to create everything from video CDs to greetings cards and e-cards to photobooks.

Perhaps the most powerful and indeed useful tool of Album 2.0 is the 'tagging' system, which allows the user to categorise and cross-reference images. You can apply as many tags to an image as you wish for future searches, although

attaching tags is a slow process – but then again, don't forget just how slow editing slides from a lightbox is, let alone labelling them up!

This software is certainly hardware hungry, and designed to run on more modern machines. It recommends users to have a Pentium P3 or Pentium P4 processor, a minimum of 128MB of RAM, a

minimum of 250MB of hard-disk space and an operating platform of Windows XP, ME or 2000. At £39.99, Album 2.0 is certainly good value for money and I thoroughly recommend it. One question remains though for the creators of Album 2.0 – why no version for the Macintosh platform?

Hugh Harrop

BIRDING ON BORROWED TIME

By Phoebe Snetsinger.
American Birding Association,
2003. 307 pages;
16 colour plates; numerous
black-and-white drawings.
ISBN 1-878788-41-8.
Paperback, US\$19.95.

To anyone with an interest in world listing, Phoebe Snetsinger is something of a legend. Upon seeing a Rufous-necked Wood Rail *Aramides axillaris* in Mexico in September 1995, she became the first person to reach the magical 8,000-species mark, and at the time of her death, in a road-traffic accident while birding in Madagascar

in late 1999, had seen 85% of all the world's bird species. This autobiography, completed posthumously by her son, tells the story of her quest following her introduction to birding, at the age of 34, by a neighbour in Minnesota. In many ways it is a whistle-stop tour around the globe's birding destinations packed with sumptuous species that for many people will remain no more than a dream; but it also provides an insight into the trials and tribulations she faced in completing her goal. En route, she encountered an earthquake in Costa Rica measuring 7.6 on the Richter scale; was hounded out of New Britain by villagers who falsely suspected her involvement in a murder; overcame a brutal assault in New Guinea; and survived a

boating accident off Irian Jaya. Perhaps her biggest battle, though, was with cancer – three independent specialists all gave her less than a year to live when she was diagnosed with cancer in 1981, and it was this that spurred her on towards her remarkable achievement. As well as a captivating read – it took me just one sitting to read it from cover to cover – the book manages to capture the fascination and thrill that birds hold for so many of us, and the lengths to which one person would go to pursue what, by any standards, became an all-consuming obsession. One that perhaps only fellow birders can really understand.

Paul Harvey

GOSNEY IN ALASKA

By David Gosney. BirdGuides
Videos, Sheffield, 2003.
Video; running time 53
minutes. £19.95.

There cannot be a birder alive who has not dreamed of travelling to Alaska. Dave Gosney lived that dream, and here is his holiday video. It is subtitled 'The bird watching misadventure of a lifetime', but if being fog-bound on St Paul in the Pribilof Islands, enabling him to spend more time looking at Tufted Puffins *Fratercula cirrhata*, is misadventure, then Dave has led a charmed life.

There is mouthwatering footage of many of Alaska's charismatic seabirds and shorebirds...

and a lot of footage of Dave. Indeed, the genial Yorkshireman seems to spend more time on screen than the birds he sets out to show us. Starting his Alaskan journey near Anchorage, he provides some useful footage of Three-toed Woodpecker *Picoides tridactylis dorsalis*, together with Black-backed Woodpecker *P. arcticus*, before venturing farther afield. In Denali National Park, he encounters Gyr Falcon *Falco rusticolus* and, eventually, finds Arctic Warbler *Phylloscopus borealis*; the only Old World warbler to breed in North America.

But the waders and seabirds are the real attraction. Smart breeding-plumaged Lesser Yellowlegs *Tringa flavipes*, Long-billed Dowitcher *Limnodromus scolopaceus* and Semipalmated Sandpiper *Calidris*

pusilla are just the appetisers. When Gosney flies to St Paul Island, we are treated to a feast of auks. Accessible seabird cliffs allow frame-filling shots of Tufted Puffin, Horned Puffin *Fratercula corniculata* and three species of auklet, including the outrageous Crested Auklet *Aethia cristatella*. Throw in Snowy Owl *Bubo scandiacus*, 20 Long-tailed Skuas *Stercorarius longicaudus* (including a very rare dark morph, perhaps filmed here for the first time) feeding together, and Varied Thrush *Zoothera naevia*, and there are special birds for all tastes. I would love to have seen more of them – and a little less of Dave.

Adrian Pitches

News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

Global warming will wipe out the Scottish Crossbill

More than one million species of land animals and plants could become extinct within 50 years as a result of global warming, according to new research. Among them would be Britain's only endemic bird species, the Scottish Crossbill *Loxia scotica*. Prof. Chris Thomas of Leeds University, the lead author of the research paper, published in *Nature* in January, called his team's findings 'terrifying'. As part of the study, researchers from the RSPB and Durham University looked at 34 species of bird whose range is largely restricted to Europe. They found that the Scottish Crossbill is particularly at risk because its Caledonian pine forest habitat depends on a cooler climate than that which is projected for the Highlands in 2050.

Dr Rhys Green, one of the

paper's co-authors, said: 'The climatic conditions favoured by the Scottish Crossbill will then only be found in Iceland.' And, with masterly understatement, he added: 'It seems unlikely that Scottish Crossbills will move there.' But if they do not, then they will need to adapt to conditions they have not experienced recently. Iceland has little in the way of woodland, never mind mature pine forest. Mind you, taxonomists may wipe out the Scottish Crossbill even more rapidly than climate change does if they lump it with Parrot Crossbill *L. pytyopsittacus* and/or Common Crossbill *L. curvirostra*.

Another species the team considered was Red Kite *Milvus milvus*. Its world range looks likely to shift and contract if it remains within its present preferred climate zone, but

it is likely to fare better in Britain. The reintroduced populations in Yorkshire, the Chilterns, Northamptonshire and Scotland, and the growing native population in Wales could become increasingly important in global terms.

The RSPB's climate change campaigner John Lanchbery said: 'This is a deeply depressing paper.' And in a reference to the USA, the world's biggest polluting nation, generating 25% of all carbon dioxide emissions, he added: 'President Bush risks having the biggest impact on wildlife since the meteorite that wiped out the dinosaurs.'

Link: 'Feeling the heat: climate change and biodiversity loss' abstract www.nature.com/nature/links/040108/040108-1.html

RSPB urges caution in offshore windrush

Replacing power generation from fossil fuels with renewable energy supplies is a key objective if global warming is to be reduced. The UK Government aspires to finding a renewable source for 20% of the nation's electricity supplies by 2020, and in its latest endorsement of wind energy 15 sites have been licensed to developers in three strategic areas of shallow sea: the Thames Estuary, the Greater Wash and northwest England.

The windfarms, which are expected to be producing electricity by the end of the decade, will together provide between 5.4 and 7.2 gigawatts (GW) of generating capacity: enough electricity for more than one in six UK households. The RSPB has been a keen advocate of wind energy to its membership – indeed, its RSPB Energy partnership with Scottish and Southern Energy has yielded

£1 million for the Society – but the RSPB's conservation director, Mark Avery, is extremely concerned about the latest windfarm proposals. He said: 'An initial analysis of the proposed sites suggests that there could be serious problems for birds. We already know that large numbers of Red-throated Divers *Gavia stellata* congregate in the Greater Thames and off the north Norfolk coast in late winter. Given that most of the earmarked sites are in areas identified by English Nature as potentially being of international importance for wildlife, it is quite possible that detailed surveys could reveal conflicts. It is vital that the Government collects more detailed data about bird numbers and movements this winter to inform any final decisions.'

Of the 15 windfarms, three are fully outside territorial waters

(more than 12 miles, or 19 km, from land) and include the world's largest proposed offshore windfarm, in the Greater Wash area, 30-40 km off the Lincolnshire coast, which could have up to 250 or more turbines and provide up to 1.2 GW of generating capacity.

For the full list of sites and developers see the Crown Estate website: www.crownestate.co.uk/cgi-bin/estates/marine/windfarms/interest.cgi?State=6

New Recorder for Scilly

The new recorder for the Isles of Scilly is John Higginson, 30 Sallyport, Hugh Town, St Mary's, Isles of Scilly TR21 0JE.

No more Cliffe hangars

Of course, one way the UK Government could drastically reduce global warming would be to tax aviation fuel, with the resultant knock-on effect in the price of flights. Rather than curtail the burgeoning cheap-flight market, however, and the consequent rise in carbon dioxide emissions in the upper atmosphere, the Government is keen to encourage it. The long-awaited announcement on airport expansion in the UK was made on 15th December last year. It recommended a new runway at Stansted in Essex by 2012 and another runway at Heathrow by 2020 to satisfy projected passenger numbers of 500 million by 2030;

and at the same time ruled out a new airport for London at Cliffe on the North Kent marshes.

This was no great surprise to the travel industry or the airlines, but it was an enormous relief to the No Airport @ Cliffe campaign spearheaded by the RSPB and local people. It was such an effective lobbying operation that half of all the responses to the Government consultation about airport expansion in south-east England came from Cliffe campaigners. Well done them.

Link: Department for Transport (www.dft.gov.uk).

Stay of execution for the Ebro Delta

Another major wetland which has been under threat and also won a reprieve (though perhaps only a brief one) is the Ebro Delta in northeast Spain, home to breeding Audouin's Gulls *Larus audouinii* and Glossy Ibis *Plegadis falcinellus*. The Spanish Government's National Hydrological Plan (NHP) proposes to siphon off 'excess water' from the Ebro River, which has its source in the Pyrenees and flows into the sea just south of Barcelona. This water will then be transferred to Spain's dry southeast region, where the Government claims that the water is needed for agribusiness. The NHP involves building 118 dams and more than 1,000 km of canals and pipelines with an estimated price tag of €18 billion. One-third of this money is expected to come from European taxpayers.

The NHP has caused huge controversy in Spain, with more than a million people taking to the streets in protest. It also seems to contravene EU Directives, yet the Spanish Government seems determined to press ahead with the scheme. Margot Wallström, European Environment Commissioner, has said that she will delay any decision on funding for this controversial project until she sees further proof that it does not break EU environmental laws.



Richard Brooks/Windrush

51. Audouin's Gull *Larus audouinii*, Mallorca, March 1992.

Environmental groups, including WWF, the European Environmental Bureau (EEB) and BirdLife International, have expressed delight with the delay over the Ebro transfer section of the plan. The groups also claim that no Environmental Impact Assessment was carried out on the Plan before it was implemented in the Spanish legislation.

Link: Rivernet (www.rivernet.org/Iberian/planhydro.htm).

Huge reduction in Balearic reserves

Elsewhere in Spain, the Government of the Balearic Islands is proposing drastic cutbacks to two of the islands' protected areas: the Parc Natural de la Península de Llevant (Mallorca) and the Parc Natural de Cala Horta (Ibiza). The Parc Natural de la Península de Llevant would lose c. 94% of its protected areas, from the current 16,232 ha of protected land and 5,275 ha of protected marine habitat to just 1,856 ha of protected land (the public estates). The Parc Natural de Cala d'Horta will practically disappear from the main island of Ibiza (reduced to just 0.5 ha). The only protected areas will be offshore islets, with no marine protected areas. Overall, 91% of the current protected area (27,733 ha) will be lost if plans go ahead, cutting

the Parc to just 2,342 ha.

BirdLife is concerned that the proposed removal of legal protection will have a significant negative effect on four Important Bird Areas (IBAs) in the two parks and will open up the land to development and urbanisation detrimental to the islands' wildlife, particularly the Balearic form of Marmora's Warbler *Sylvia (sarda) balearica* (considered by some authorities to be a separate species), the Mediterranean subspecies of Shag *Phalacrocorax aristotelis desmarestii* and Eleonora's Falcon *Falco eleonorae*. For further information, and to sign a petition against the proposals, visit the following URL: www.birdlife.org/action/campaigns/iba_campaign/help/balearic.html

Kite flies to Portugal – but is it safe to go home?

A Scottish Red Kite has recently entered the record books with the longest recorded flight of any British kite. The young bird was found in northern Portugal, more than 2,000 km from its home in central Scotland. Workers at a small quarry near Airao, just north of Porto, recovered the bird, which was identified by its leg ring and wing tags. Suffering from a fractured wing, it was taken into care at a raptor recovery centre in the nearby Alvao National Park, and is expected to make a full recovery. It will then be released and, hopefully, return to Scotland. It was tagged originally by RSPB staff at a breeding site near Stirling in June 2003, and was last seen at the Argaty kite feeding station at Doune in mid October. The previous long-distance record for a Scottish Red Kite involved a bird near Dingwall, Ross-shire, which was later found near Bilbao, Spain, in 1999.

The kite found in Portugal may, however, be safer if it stays put, because 2003 has been one of the worst years on record for illegal poisoning in Scotland, with nine birds confirmed deliberately killed to date. Indeed, RSPB Scotland estimates that a third of the 300 Red Kites introduced into Scotland since 1989 have been killed by poisoned bait. And the illegal poisoning is predominantly taking place on sporting estates – 80% of dead birds were found on land used for shooting (see also page 92). Duncan Orr-Ewing, RSPB Scotland head of policy, said: 'We're hoping that our three colonies (Inverness-shire, Central Scotland and Dumfries & Galloway) will join up and create a Red Kite population across the country but this is being impeded by a problem largely associated with sporting estates.' RSPB Scotland is now pressing for a change in the law north of the border so that anyone caught with a pesticide for which they have no justifiable use is fined automatically.

Links: RSPB (www.rspb.org.uk); Argaty Red Kites (www.argatyredkites.co.uk).

First 2003 report?

Is this a record? An annual report delivered on 1st January! This is the achievement of the tiny band of birders providing constant coverage of Carr Vale in Derbyshire, whose substantial annual report for 2003 was completed by 31st December. The highlight of 2003 was their first Pectoral Sandpiper *Calidris melanotos*, for one day in September, taking the Carr Vale list to 197. The impressive observer coverage at Carr Vale stretches back to January 1997, with just 34 days missed over those seven years; and all this has been achieved by a hard core of just ten birders. For details of how to get your copy, see page 80.

Where eagles dare to soar

Despite a marked increase in the number of Golden Eagles *Aquila chrysaetos* in the Hebrides, Scotland's overall population of this magnificent raptor has remained unchanged in 11 years, and the species still faces a number of threats. Scotland is home to virtually all of the UK's breeding population of Golden Eagles, which 11 years ago was an estimated 422 pairs. The most recent survey, by the RSPB, Scottish Natural Heritage, and the Scottish Raptor Study Group (SRSG), was conducted between January and late July last year, and revealed that the UK population is now 431 pairs. The apparent increase of 2% since 1992 may be due partly to more comprehensive survey coverage in 2003, so the preliminary conclusion is that the population has remained stable. Nonetheless, this overall figure conceals decreases in several areas.

Prior to 1800, Golden Eagles bred in hilly districts throughout the UK, with perhaps 500 pairs in Scotland, and at least 50 in England (as far south as Derbyshire in the late seventeenth century) and Wales in the Middle Ages. The size of the extinct population in Northern Ireland is not known. Eagles had been exterminated from Wales by the mid eighteenth century and from England by the early nineteenth century, and the last breeding record from Northern Ireland was in Co. Antrim in 1953-1960.

In the Hebrides, the current population of 147 pairs is up nearly 20% on the 1992 figure. This illustrates the growing national and international importance of these islands for Golden Eagles. In contrast, continued declines in eagle numbers in parts of mainland Scotland are worrying. SRSG's, Patrick Stirling-Aird, said: 'While at first glance the picture for Golden Eagles in Scotland seems healthy, there is real cause for concern over the population decreases in eastern areas of the Highlands, and over poor breeding success in some locations there. The underlying causes of such population decreases and low breeding success need to be tackled.'

Grey Partridges are jailbirds

It has the second-largest government estate after the Ministry of Defence and it is implementing its own Biodiversity Action Plan (BAP). The Prison Service is responsible for a diverse range of habitats, from farms to horticultural enterprises, which are home to many important wildlife species. The BAPs for the Grey Partridge *Perdix perdix* and the Brown Hare *Lepus europaeus* are administered by the Game Conservancy Trust. Peter Thompson, farmland ecology adviser with the Trust said, 'The Grey Partridge and Brown Hare have suffered huge population declines in some parts of the country, so we are delighted to support the Prison Service with advice on appropriate feeding, and the creation of the right habitats to conserve these threatened species.'

Birding bibliography online

If you are seeking a summary of the contents of the latest bird journals from across Europe, there is a useful online resource called Eurobirding.com, which has just added the French journal *Ornithos* to its roster. Among the 12 titles painstakingly transcribed are *Alula*, *Dutch Birding* and, of course, *British Birds*. But a note of caution – it's not 100% accurate. In December's *BB* entry, for example, the stated winner of the Carl Zeiss Award is wrong. And, strangely,

there is no mention of 'News and comment'!

Meanwhile, an impressive search engine called OWL has been launched by the BOU, American Ornithologists' Union (AOU), and Birds Australia (BA). Ornithological Worldwide Literature (OWL) is an online bibliographic database for ornithologists that replaces Recent Ornithological Literature (ROL), which has been run by the same organisations for many years. OWL is an indexed bibliographic

database of citations from the worldwide scientific literature which pertain to the science of ornithology, and deals almost exclusively with serial publications. Its scope will be more than just the recent literature of ornithology: the aim is to develop an online resource with a database that covers the last 50 years or more.

Links:

Eurobirding (www.eurobirding.com);

OWL (www.birdlit.org).

Georgia on my mind

With the promise of greater democracy – and, hopefully, greater stability – in the Caucasian republic of Georgia, following the 'rose revolution' last November, interest in this far-flung outpost of the Western Palearctic has intensified. It is the only area within the Western Palearctic with breeding Great Rosefinch *Carpodacus rubicilla* and G黚denstadt's Redstart

Phoenicurus erythrogaster, and is home to the near-endemic Caucasian Snowcock *Tetraogallus caucasicus*. There is plenty more besides, and a summary of recent noteworthy records from Georgia has been posted on the Bird Conservation Union of Georgia website by its chairman, Alexander Abuladze. There is also an e-mail discussion group, BirdNetCaucasus.

For birders interested in visiting Georgia, SUNBIRD is running a tour in May: one of the first birding tours to the republic for a decade.

Links: Bird Conservation Union of

Georgia (www.bcug.narod.ru);

SUNBIRD

(www.sunbirdtours.co.uk).

A new bird observatory

Britain's newest bird observatory will be formally recognised by the Bird Observatories Council early in 2004. Sanda Island BO is Scotland's fourth observatory, along with the Isle of May, North Ronaldsay and Fair Isle. This latest island-based obs is the first on the Scottish west coast – Sanda Island is off the Mull of Kintyre, equidistant between Campbeltown and Red Bay in Northern Ireland. There have been two full seasons of survey work on Sanda Island already and there are currently ten ornithological studies underway on the 400-acre privately owned island. For details about the observatory – and a copy of the first annual report – contact Rab Morton, 33 Longrow, Campbeltown, Argyll PA28 6ER; tel. (07979) 013954; e-mail: Rabmorton@hotmail.com

Link: www.sanda-island.co.uk

New generic or scientific names (continued)

Further to the editorial in last month's issue, a number of further changes to the generic or scientific names of birds on the British List were recommended in the January 2004 issue of *Ibis* (*Ibis* 146: 153-156), but were received too late for us to squeeze them into the January issue of *BB*. The following changes were adopted by *BB* from 1st January, and this list should be regarded as an extension of Appendix 4 (*Brit. Birds* 97: 5).

Egyptian Goose *Alopochen aegyptiaca* (formerly *A. aegyptiacus*)

Ptarmigan *Lagopus muta* (formerly *L. mutus*)

Stilt Sandpiper *Calidris himantopus* (formerly *Micropalama himantopus*)

Spotted Sandpiper *Actitis macularia* (formerly *A. macularia*)

Great Skua *Stercorarius skua* (formerly *Catharacta skua*)

South Polar Skua *S. maccormicki* (formerly *C. maccormicki*)

Snowy Owl *Bubo scandiacus* (formerly *Nyctea scandiaca*)

Blue-cheeked Bee-eater *Merops persicus* (formerly *M. superciliosus*)

House Martin *Delichon urbicum* (formerly *D. urbica*)

Common Stonechat *Saxicola torquatus* (formerly *S. torquata*)

Corn Bunting *Emberiza calandra* (formerly *Miliaria calandra*)

Blue Grosbeak *Passerina caerulea* (formerly *Gniraca caerulea*)

These changes have been incorporated into a newly revised *BB* list of names now available on our website, www.britishbirds.co.uk



Monthly Marathon

Photo no. 202: Semi-collared Flycatcher

Well, it makes a change from a pipit *Anthus* or a gull *Larus* I hear you cry, and it will be fairly obvious to most readers of *British Birds* that photo number 202 (*Brit. Birds* 96: plate 329, repeated here as plate 52) shows one of the black-and-white flycatchers of the genus *Ficedula*. Furthermore, this individual is instantly recognisable as a male. But of which species?

At first glance, we see an extensive white panel in the closed wing; white sides to the neck, which do not continue right around the hindneck to form a complete collar; and dark blackish-brown tail and flight feathers, except for a restricted strip of white at the base of the primaries. Unfortunately, as the bird is facing away from us, we cannot see the extent and pattern of any white on the forehead, a feature which would help us considerably. Collared Flycatcher *Ficedula albicollis* invariably shows an extensive white forehead-patch, whereas male Pied *F. hypoleuca* and Semi-collared Flycatchers *F. semitorquata* show a much reduced, although variable, amount, which is often divided in the centre.

The extensive white wing-panel does not immediately narrow the species range down, since all black-and-white male *Ficedula* flycatchers share this feature, although there is much variation within the species group. Likewise, the closed dark tail of our bird is of little use to us, as any white in the outer rectrices will be obscured by the central pair, which are wholly dark in all species.

Considering the white sides to the neck more carefully, the white appears to extend too far round the neck for Pied Flycatcher, so making this an unlikely candidate for our mystery bird. Similarly, Collared Flycatcher invariably displays a conspicuous white collar stretching onto the nape, with at most a narrow greyish divide down the



Robin Chittenden

52. Semi-collared Flycatcher *Ficedula semitorquata*, Turkey, June 1991.

centre. Fortified by that strong clue, a closer inspection of the wing enables us to reach a conclusion about the bird's identity. Three prominently white-tipped median coverts are clearly visible, and this feature alone establishes our mystery bird as a Semi-collared Flycatcher, since this is the only member of the group to show an obvious white median-covert wing-bar in male plumage.

Before making our decision final, however, it should not be forgotten that Pied and Collared Flycatchers regularly hybridise where their ranges overlap. On the Swedish islands of Gotland and Öland, for example, mixed pairings occur frequently, with hybrids regularly returning to establish breeding territories in subsequent years. Fortunately, for contestants and authors alike, hybrids are not included in Monthly Marathon, which conveniently lets us off that particular hook, but further reading on this fascinating subject can be found in the paper by Krister Mild (*Birding World* 7: 139-151).

So, with all hybrids eliminated by default, must Semi-collared Fly-

catcher be the solution after all? Well, almost, but not quite: from January 2004, *British Birds* has acknowledged the recent split of Atlas Flycatcher *F. speculigera* from Pied Flycatcher. It would have been unreasonable to expect contestants to predict this in advance, but for the sake of completeness we include mention of it here. Although Atlas Flycatcher breeds in the mountains of North Africa, it closely resembles Semi-collared Flycatcher of the Balkans, sharing with it the conspicuous white sides to the neck and, in adult males, a large white patch at the base of the primaries and a paler, although somewhat variable, rump patch. If the forehead had been visible, Atlas Flycatcher would show a larger and more extensive white patch that extended level with the front of the eye. An additional feature, again hidden from view in the photograph, is the colour and pattern of the outer rectrices of the tail: in Atlas Flycatcher they would appear entirely dark, while in Semi-collared they show extensive white bases.

This Semi-collared Flycatcher was photographed in Turkey by

Robin Chittenden in June 1991. Knowing the time of year, we can age it as a first-summer male. The white patch at the base of the primaries is thin and indistinct, not as extensive as would be shown by an adult male. Furthermore, the brownish primaries contrast with the black of the upperparts, a further pointer to the fact that it was fledged the previous summer (juvenile primaries are retained until the complete post-breeding moult in July of the second calendar-year). An older bird would show blackish primaries, lacking obvious contrast with the upperparts.

Stuart Elsom

A majority (70%) of contestants identified this flycatcher correctly, while most of the remaining votes were for Pied Flycatcher/Atlas Flycatcher. Crucially, however, one of our two joint leaders from the previous stage voted for Atlas Flycatcher, and so it is that we acclaim Diederik Kok as the winner of the twelfth Monthly Marathon competition! Warm congratulations to Diederik, with commiserations to his fellow countryman Nils van Duivendijk, who had shared the lead with Diederik for several rounds. Diederik Kok's unmatched sequence of eleven straight correct answers means that he wins the prize of £1,500 towards the



53. Third stage in thirteenth 'Marathon'. Identify the species. Read the rules (see page 54), then send in your answer on a postcard to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, or by e-mail to editor@britishbirds.co.uk, to arrive by 31st March 2004.

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And with that we set off again on a new round of the 'Marathon'. The first two stages of this have appeared already, and thus photo number 203 (*Brit. Birds* 96: plate 404, in the December 2003 issue) becomes the first stage in the new competition, photo number 204 (plate 26 in the January issue) becomes the second stage, while photo number 205 (below) represents the third stage. As with the round just ended, the prize

for the next winner will be £1,500 towards the Sunbird holiday of your choice. We wish all contestants the best of luck!

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Lesser Scaup *Aythya affinis* Studland (Dorset), long-stayer to 11th January; Castle Loch (Dumfries & Galloway), 27th December to 15th January; Lee Reservoirs (Co. Cork), 8th January; Exminster Marshes (Devon), 10th-15th January. **King Eider** *Somateria spectabilis* Leven (Fife), 13th December to 13th January at

least; Loch Ryan (Dumfries & Galloway), 29th December to 13th January at least; Bluemull Sound (Shetland), 14th January.

Glossy Ibis *Plegadis falcinellus* Bowling Green Marsh (Devon), long-stayer to at least 15th January. **American Coot** *Fulica americana* Loch of Clickimin (Shetland), long-stayer to at least 15th January.

Lesser Yellowlegs *Tringa flavipes* Hayle Estuary (Cornwall), long-stayer to at least 15th January. **Bona-parte's Gull** *Larus philadelphia* Gannel Estuary (Cornwall), 8th-14th January. **Forster's Tern** *Sterna forsteri* Wexford harbour (Co. Wexford), present until mid January. **Little Auk** *Alle alle* 100 past Tynningham, and 219 past Dunbar (both Lothian), 27th December.

Richard's Pipit *Anthus novae-seelandiae* Llanilid (Glamorgan), long-stayer to at least 14th January. **Waxwing** *Bombycilla garrulus* Most of the large flocks were in Yorkshire in December, including 50 in Hillsborough on 16th, 70 in Halifax on 16th-22nd, 120 in Sheffield on 19th with 225 there on 29th, and 200 in Leeds on 27th. Small flocks, typically of less than ten, were widespread. **American Robin** *Turdus migra-*

torius Godrevy (Cornwall), 14th December to at least 15th January; Grimsby (Lincolnshire), 1st-15th January at least.

Sardinian Warbler *Sylvia melanocephala* In Skegness (Lincolnshire), the long-staying female was



Stuart Piner

54. First-winter Lesser Yellowlegs *Tringa flavipes*, Hayle Estuary, Cornwall, January 2004.



Graham Catley

55. Shore Lark *Eremophila alpestris*, Tetney, Lincolnshire, December 2003.

Sam Alexander



56. Desert Wheatear *Oenanthe deserti*, Girdleness, Northeast Scotland, November 2003.

present until at least 4th January, with the long-staying male in the same area to at least 14th January. **Hume's Warbler** *Phylloscopus humei* Caernarvon (Gwynedd), long-stayer to at least 14th January; Hook Head (Co. Wexford), present to mid January at least; Fairlop Waters (London), 11th-15th January at least. **Dusky Warbler** *Phylloscopus fuscatus* Clennon Valley

(Devon), long-stayer to at least 15th January; Taunton (Somerset), 4th-15th January at least.

Rose-coloured Starling *Sturnus roseus* Ely (Cambridgeshire), 15th December; St Agnes (Scilly), long-stayer until at least 10th January. **Baltimore Oriole** *Icterus galbula* Headington (Oxfordshire), 14th December to 15th January at least.

George Reszeter



57. American Robin *Turdus migratorius*, Godrevy, Cornwall, December 2003



Steve Young

58. American Robin *Turdus migratorius*, Grimsby, Lincolnshire, January 2004.



Bill Boston

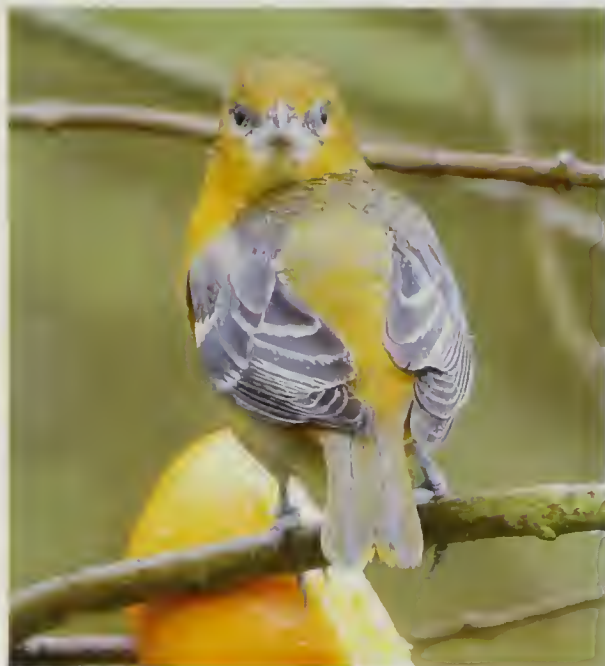
59. American Robin *Turdus migratorius*, Grimsby, Lincolnshire, January 2004.

Steve Young



60. Hume's Warbler *Phylloscopus humei*, Caernarvon, Gwynedd, January 2004.

Bill Boston



Robin Chittenden

Robin Chittenden



61-63. Baltimore Oriole *Icterus galbula*, Headington, Oxford, December 2003.

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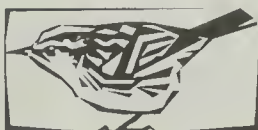
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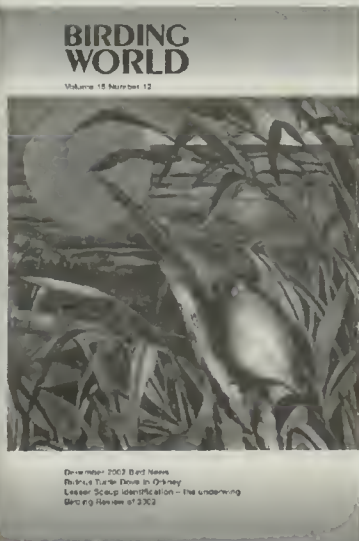
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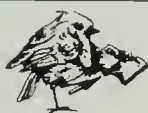
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English and scientific names and sequence of birds should follow *The 'British Birds' List of Birds of the Western Palearctic* (1997); or, for non-West Palearctic species, Monroe & Sibley (1993), *A World Checklist of Birds*. Names of plants should follow Dony et al. (1986), *English Names of Wild Flowers*. Names of mammals should follow Corbet & Harris (1991), *The Handbook of British Mammals*, 3rd edition. Topographical (plumage and structure) and ageing terminology should follow editorial recommendations (*Brit. Birds* 74: 239-242; 78: 419-427; 80: 502).

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Wintering farmland birds: results from mass- participation surveys

Simon Gillings and Peter Beaven



Fieldfare *Turdus pilaris* - Simon Gillings

ABSTRACT Farmland in winter is an important habitat for a wide variety of resident and migratory birds. Many farmland species have declined in recent years, and knowledge of their winter ecology and distribution is vital before providing recommendations for management practices designed to reverse these declines. Two surveys organised by the BTO and *British Birds – Casual Records* and *Winter Walks* – aimed to draw on the local knowledge and enthusiasm of birdwatchers to assess the abundance, distribution and habitat use of farmland birds in winter. This paper reports some of the early findings from these surveys.

Farmland birds have been headline news in both the popular and scientific press recently as a result of marked population declines, especially since the mid 1970s. Concerted scientific work and lobbying have resulted in several species being identified as 'Species of Conservation Concern' (Gregory *et al.* 2002) and the inclusion of wild bird popula-

tion trends as one of the 15 headline indicators in the Government's 'Indicators of Sustainable Development' (DETR 1998). In order for the Government to achieve their pledge of reversing farmland bird declines by 2020, we require continually updated knowledge of the status and ecology of farmland birds and monitoring of management schemes (Chamberlain & Vickery

2002). This is particularly true for the winter period, since poor winter survival is implicated in the declines of many species (Siriwardena *et al.* 2000). Furthermore, wintering in poor-quality habitat may affect subsequent breeding success (e.g. Marra *et al.* 1998).

The last time wintering birds were surveyed across a wide geographic area was for the BTO/Irish Wildbird Conservancy *Winter Atlas* in the early 1980s (Lack 1986). Since then, changes in farming (Chamberlain *et al.* 2000; Vickery *et al.* 2001; Robinson & Sutherland 2002), continuing population declines (Fuller 2000) and changing winter weather (Hulme 1999) may have altered the range and abundance of farmland birds in winter, at the same time altering patterns of habitat use. Against this background, the BTO, in partnership with JNCC, began the *Winter Farmland Bird Survey* (WFBS), a three-year (1999/00–2001/02) volunteer survey of a suite of common, declining or scarce farmland bird species. The aims of WFBS were to assess national, regional and seasonal patterns of distribution, abundance and habitat selection across a large geographic area and a number of consecutive winters.

The core part of WFBS was a detailed survey of 1-km squares randomly located throughout lowland agricultural areas of Britain. Some species are, however, likely to be so scarce that random squares will provide few records. For example, Tree Sparrows *Passer montanus* and Corn Buntings *Emberiza calandra* are now so scarce that they regularly feature on local birdlines. Yet this also implies that birdwatchers know where these species still persist. The random square survey was supplemented by two mass-participation volunteer surveys, aimed at tapping the enthusiasm and knowledge of amateur birdwatchers: *Casual Records* was designed to amass a large quantity of information on the numbers and distribution of 'significant' flocks of farmland birds, and *Winter Walks* involved visiting a standard area regularly

and recording the presence or absence of selected species. This paper presents the results of the *Casual Records* and *Winter Walks* surveys, concentrating on five of the 30 target species. These include a gamebird (Grey Partridge *Perdix perdix*), a wader (Northern Lapwing *Vanellus vanellus*, hereafter 'Lapwing'), a migratory thrush (Fieldfare *Turdus pilaris*) and two granivorous passerines, one still relatively widespread (Sky Lark *Alauda arvensis*) and the other scarce (Tree Sparrow).

Methods

Forms for *Winter Walks* and *Casual Records* were circulated to BTO members and *British Birds* subscribers in the autumns of 1999, 2000 and 2001. The field methods were simple. For *Winter Walks*, observers chose a route at least 1 km in length through farmland and visited it regularly between November and February. On



David Mason/Windrush

64. Grey Partridges *Perdix perdix* were reported chiefly from central and eastern parts of England during the surveys described here, with few records from Wales or Scotland.

Table 1. Summary of uptake and reporting of farmland birds from *Casual Records* and *Winter Walks* surveys in the three winters of coverage.

	1999/00	2000/01	2001/02
<i>Casual Records</i>			
Forms received	440	302	280
Flocks recorded	7,301	4,860	5,353
Total birds counted	1,238,477	852,530	893,045
<i>Winter Walks</i>			
Routes visited	447	275	303
Flocks recorded	21,810	13,688	15,990
Total birds counted	554,861	351,240	395,686



Fig. 1. Maps showing the distribution of (a) relative density of BTO members; (b) 10-km squares containing *Winter Walks* routes visited in at least one of the three winters; (c) 10-km squares from which *Casual Records* were received in at least one of the three winters; (d) the distribution of arable crops and grassland from MAFF June agricultural census returns. On (a) and (d), increasing dot size indicates greater BTO member density and farmland area respectively.

each visit they noted the date and the number, activity and habitats used for 30 target species. *Casual Records* forms were used to record 'significant flocks' of the target species from anywhere in the country, with guidance as to what constituted a significant flock, e.g. 100 or more thrushes.

Data from the two surveys were used to derive distribution maps, flock sizes, reporting rates and measures of habitat use. By dividing all visits into weeks, from 1st November to 28th/29th February, it was possible to derive weekly reporting rates; these are simply the weekly percentage of *Winter Walks* routes on which a species was seen. They were produced to determine seasonal patterns of occurrence on farmland, and can be compared with weekly reporting rates for farmland species in gardens (see below). Habitat descriptions provided by observers were used to classify every flock into different categories such as crop types, stubbles, hedgerow, farmyards. Note that because no measures of habitat availability were taken, we cannot consider habitat *preference*, only habitat *use*. For some analyses, data were amalgamated into regions (see fig. 1). These comprised Wales and Scotland plus three English regions based on those used by the Department for Environment, Food and Rural Affairs (Defra).

The BTO/CJ *Garden BirdWatch* survey provides the only other means of assessing seasonal occurrence of birds in winter. This involves weekly records of bird species occurrences in approximately 15,000 gardens nationwide. For more information, see www.bto.org/gbw/index.htm

Results

Coverage

Table 1 summarises the staggering number of forms received, routes visited, flocks recorded and birds counted in each of the three winters of the survey. In total, *Casual Records* and *Winter Walks* supplied 69,000 records of 4.3 million birds. Across the three winters, a total of 651 *Winter Walks* routes were visited, which involved volunteers walking in excess of 22,000 km!

The distribution of *Winter Walks* routes and *Casual Records* (figs. 1b and 1c) approximately matched that of the BTO membership (fig. 1a), except that the areas of highest membership density (large urbanised areas) had few routes, presumably owing to a lack of nearby farmland. Coverage also included most of the geographic

range of farmland (fig. 1d), although there were striking gaps in *Winter Walks* coverage in fenland and the West Midlands, while the density of routes was poor in Scotland.

Observer effort in the *Winter Walks* survey could vary in two ways: first in the length of the route and second in the number of visits made per winter. Mean route length was 3.7 km. Most routes (60%) were 1-3 km in length and only 15% exceeded 5 km in length. In all three winters, 75-77% of routes were visited up to 10 times between November and February and 6-7% of routes were visited more than 20 times. There was no significant difference in the number of visits between winters (square root transformed counts, ANOVA, $F_{2,1019} = -0.55$, $P=0.58$) and so data were combined across winters.

Species prevalence and abundance

The most widespread species on farmland were Common Chaffinch *Fringilla coelebs*, Fieldfare and Common Starling *Sturnus vulgaris*, all being reported from over 75% of *Winter Walks* routes (table 2). Of the declining farmland bird species, Sky Lark, Song Thrush *T. philomelos* and Yellowhammer *E. citrinella* were all reported from over 50% of sites but Tree Sparrow and Corn Bunting were reported from only 14% and 8% of routes respectively (table 2). The majority of species showed no clear trends in reporting through the winter. Some, however, showed consistent trends across the three winters and fig. 2 shows examples of this in three common small passerines of farmland. The Sky Lark reporting rate decreased through November and December but then, in the New Year, began to increase, probably because mild weather in late winter enticed some birds to begin taking up territories, making them more apparent to the casual observer. In marked contrast, both Meadow Pipit *Anthus pratensis* and Pied Wagtail *Motacilla alba* showed consistent declines in reporting rate from November to February (fig. 2). Why this should be so is not entirely clear. Perhaps flocks are easy to find in early winter when they feed on recently tilled fields but become progressively harder to see as crops grow taller. Other explanations may include a switch to a different habitat, not well-covered by these surveys, or simply that a decline in reporting rate reflects winter mortality. In other species, the trends indicated differing abundance from one year to the next. In

Table 2. Target species of the *Winter Walks* and *Casual Records* surveys. %R is the percentage of *Winter Walks* routes (n = 651, totalled across three winters) on which each species was reported. WW and CR are the total number of individuals of each species reported by the two surveys.

	%R	WW	CR
Grey Partridge <i>Perdix perdix</i>	23%	4,606	1,856
European Golden Plover <i>Pluvialis apricaria</i>	19%	164,772	671,573
Northern Lapwing <i>Vanellus vanellus</i>	57%	233,118	864,648
Common Snipe <i>Gallinago gallinago</i>	20%	1,905	45,524
Eurasian Curlew <i>Numenius arquata</i>	12%	14,593	2,594
Stock Dove <i>Columba oenas</i>	33%	12,596	9,669
Wood Lark <i>Lullula arborea</i>	1%	51	138
Sky Lark <i>Alauda arvensis</i>	60%	38,308	39,055
Meadow Pipit <i>Anthus pratensis</i>	53%	18,171	12,534
Pied Wagtail <i>Motacilla alba</i>	63%	11,793	8,460
Common Stonechat <i>Saxicola torquata</i>	16%	844	1,161
Fieldfare <i>Turdus pilaris</i>	79%	169,035	248,572
Song Thrush <i>T. philomelos</i>	67%	5,432	2,057
Redwing <i>T. iliacus</i>	71%	68,723	57,162
Mistle Thrush <i>T. viscivorus</i>	64%	5,936	269
Common Starling <i>Sturnus vulgaris</i>	78%	308,018	744,120
House Sparrow <i>Passer domesticus</i>	54%	19,419	4,615
Tree Sparrow <i>P. montanus</i>	14%	3,431	5,377
Common Chaffinch <i>Fringilla coelebs</i>	84%	86,818	71,106
Brambling <i>F. montifringilla</i>	8%	1,007	9,553
Greenfinch <i>Carduelis chloris</i>	67%	18,526	21,988
Goldfinch <i>C. carduelis</i>	59%	15,365	22,886
Linnet <i>C. cannabina</i>	35%	29,704	50,341
Twite <i>C. flavirostris</i>	3%	909	12,648
Lesser/Common Redpoll <i>C. cabaret/flammee</i>	9%	941	1,341
Bullfinch <i>Pyrrhula pyrrhula</i>	40%	2,354	122
Snow Bunting <i>Plectrophenax nivalis</i>	1%	542	4,667
Yellowhammer <i>Emberiza citrinella</i>	58%	27,229	19,775
Reed Bunting <i>E. schoeniclus</i>	29%	5,091	4,538
Corn Bunting <i>E. calandra</i>	8%	3,186	7,415

two winters, Bramblings *Fringilla montifringilla* were present on approximately 5% of routes every week, but in winter 2000/01 they were virtually absent, a pattern mirrored in gardens (*Garden BirdWatch*). This was probably because autumn 2000 had one of the best beechmast crops for decades and so these attractive finches remained in woodlands and did not need to venture into gardens and farmland.

The total number of each species reported is also given in table 2. While there is undoubtedly some duplication, it shows some interesting patterns. Common Starling, Lapwing, European Golden Plover *Pluvialis apricaria* and Fieldfare were amongst the most reported and most abundant species. Far fewer Tree Sparrows and Corn Buntings were reported on *Winter Walks* than their close relatives. Striking differences are also apparent in the reporting of some species between the two surveys. Bullfinches *Pyrrhula*

pyrrhula, for example, were frequently encountered on *Winter Walks* but rarely recorded on *Casual Records* forms, probably because they seldom formed large flocks or joined other species, and hence failed to exceed the 20-individual threshold required to be reported via *Casual Records*.

Selected species accounts

For each of the five key species we include a map showing all records from the two surveys. For each in turn we then consider abundance, seasonal trends in reporting and measures of habitat association. It should be reiterated that these habitat associations indicate only which habitats were used and not which were preferred, since the surveys did not measure habitat availability. So, for example, regional differences in habitat use may merely reflect regional differences in which habitats are avail-

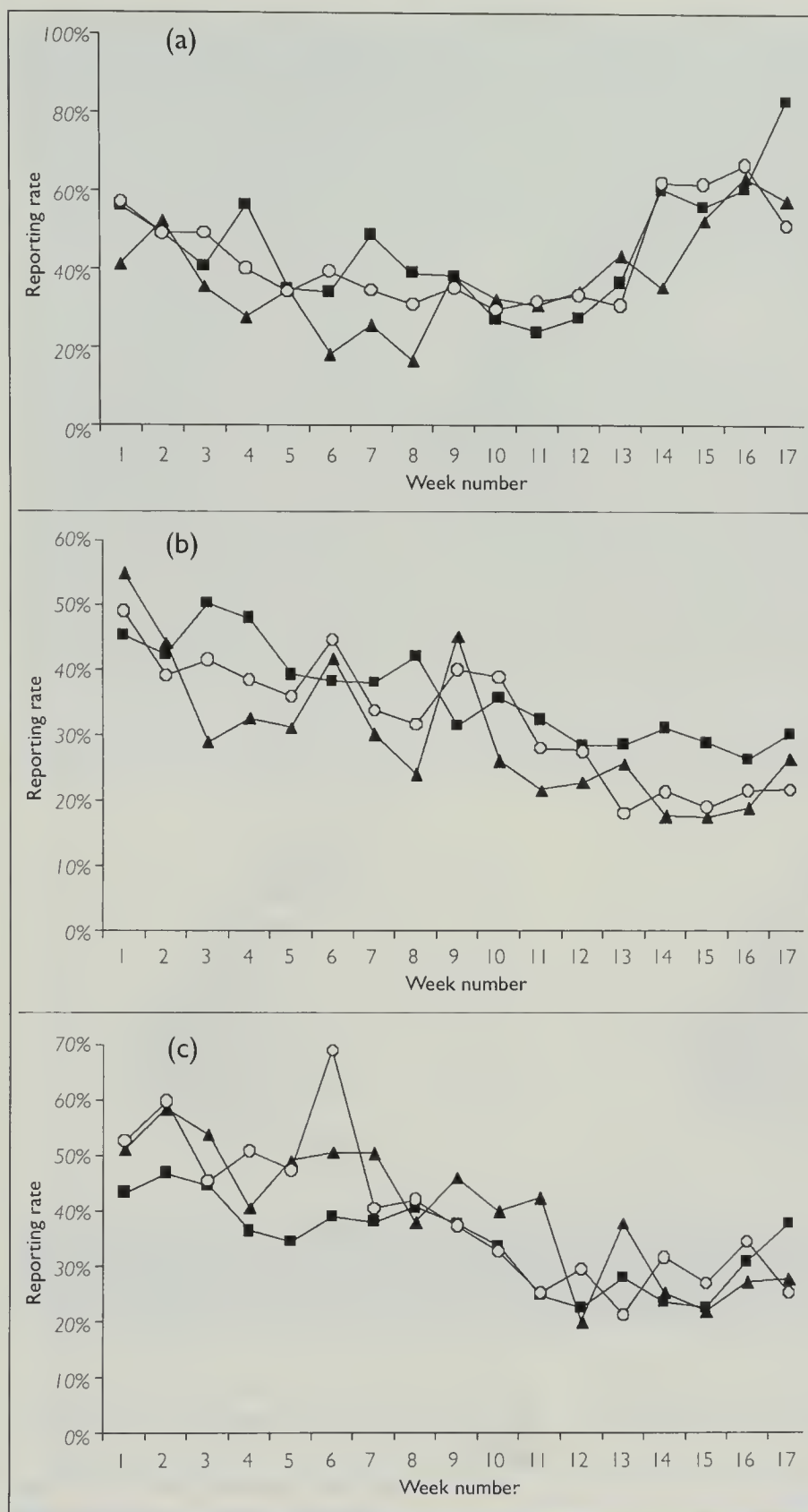


Fig. 2. Weekly reporting rates of (a) Sky Lark *Alauda arvensis*, (b) Meadow Pipit *Anthus pratensis*, and (c) Pied Wagtail *Motacilla alba* on Winter Walks routes. Different symbols indicate different winters: squares = 1999/00, triangles = 2000/01 and circles = 2001/02. Week 1 is 1st-7th November.

Grey Partridge

Grey Partridges were reported from scattered localities throughout central and eastern England, with very few in Wales and Scotland (fig. 3a). Over 600 sightings were reported via *Winter Walks* compared with only 86 from *Casual Records*. *Winter Walks* 'flocks' ranged in size from 1 to 57, with 75% numbering 10 individuals or fewer, and only 6% numbering 20 or more. Twenty birds was the minimum threshold for reporting flocks to *Casual Records* and this explains why so few were reported via that survey.

There was no seasonal trend in the percentage of *Winter Walks* routes that reported Grey Partridges, but there was a shallow decline in the average number per sighting from November to February. This was mirrored in *Casual Records* with around 30-35% of all birds being reported in November, dropping to only 15% in February. Perhaps birds were increasingly missed as crops grew taller; alternatively they may become harder to see when supplementary feeding is withdrawn at the end of the shooting season.

On *Winter Walks*, 14% of birds were associated with pastures and

able. Full results for all 30 species can be found online via www.bto.org/surveys/special/wfbs/introduction.htm

a further 25% with crops (of which 84% were cereal, 7% were oilseed rape), 23% with stubbles (83% cereal), and 11% with bare till, while

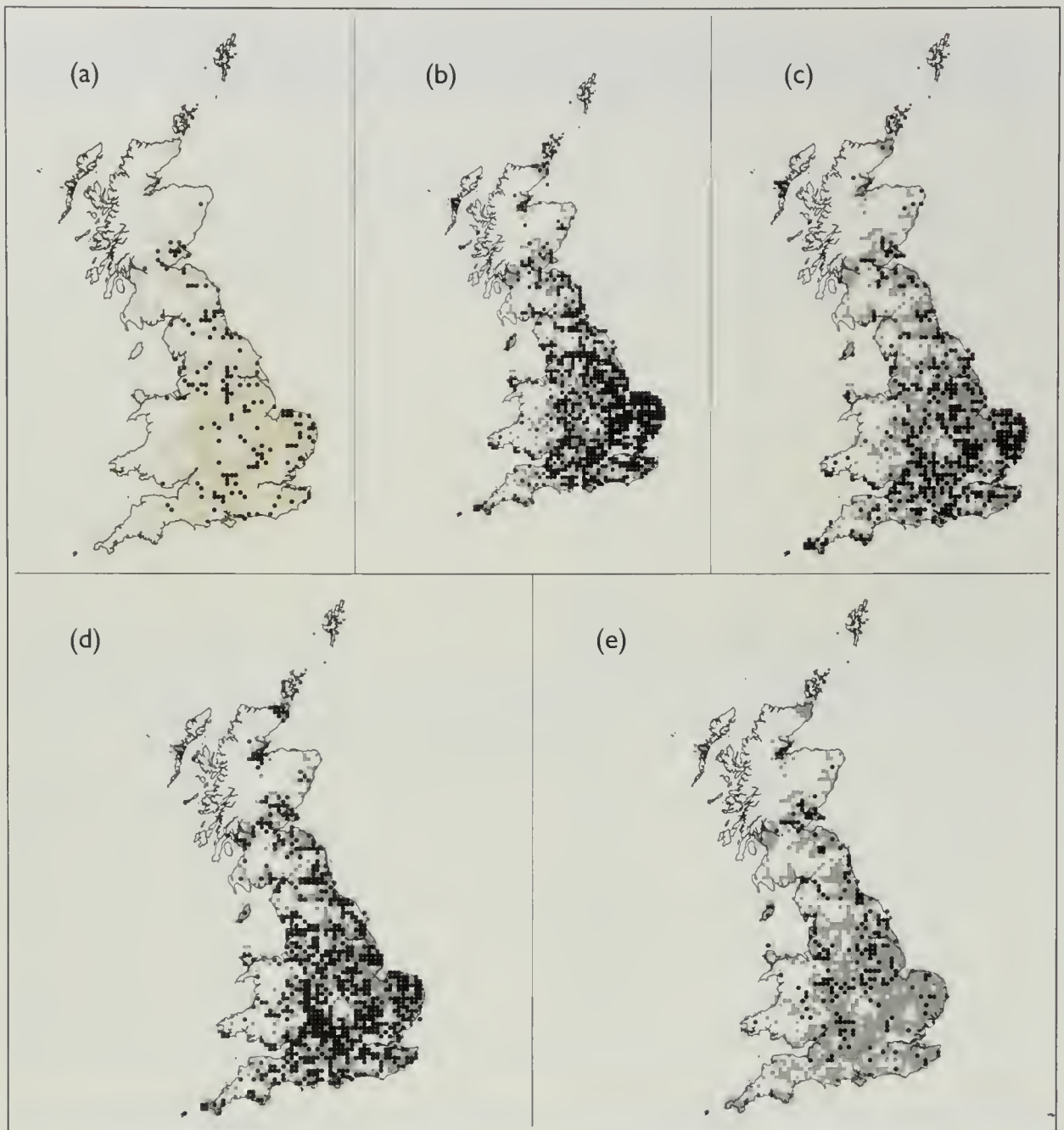


Fig. 3. Maps showing the distribution within Britain of five farmland bird species, based on records from both *Casual Records* and *Winter Walks*: (a) Grey Partridge *Perdix perdix*; (b) Northern Lapwing *Vanellus vanellus*; (c) Sky Lark *Alauda arvensis*; (d) Fieldfare *Turdus pilaris*; and (e) Tree Sparrow *Passer montanus*. Those 10-km squares receiving at least some coverage from one or other survey are shown in grey.

8% were associated with boundary habitats such as the hedge bottoms and rough vegetation around the edges of fields.

Northern Lapwing

Lapwings were reported from all areas, although in Wales small numbers were found in coastal districts only and in Scotland most birds were in the southern lowlands (fig. 3b). Lapwings were most abundant in eastern England, whereas central and western areas had more patchy occupancy. Some regional bias is expected since most records were likely to have

come from areas with most people (fig. 1a), i.e. the south and east. Nonetheless, many *Winter Walks* routes in the west were visited without plovers being found, suggesting that their distribution is genuinely skewed towards eastern areas. There was little evidence of seasonal shifts in distribution nor of seasonal trends in reporting rate and abundance between November and February.

Maximum flock sizes were 7,000 from *Casual Records* and 5,650 from *Winter Walks*. Large flocks were not the norm, however, and only 25% of flocks exceeded 120 birds. Nation-



David Tipling/Windrush

65. During the *Winter Walks/Casual Records* surveys, Northern Lapwings *Vanellus vanellus* were most frequently encountered in eastern England (see fig. 3), and comparison of these results with data from the *Winter Atlas* (Lack 1986) suggests that proportionally more Lapwings are wintering in the east than was the case in the early 1980s.

ally, approximately 25% of Lapwings were reported from cereal crops, 25% from grass, and 15% from plough and harrow. Less than 10% of birds were associated with stubbles, mostly cereal (56-80%), maize (0-27%) and sugar beet stubbles (7-8%). There were marked regional differences in habitat use, with proportionately more birds on crops and bare till in east and west England, and greater use of pasture elsewhere. In Wales, 25% were on bare till. Use of stubbles was rare except in eastern England.

Sky Lark

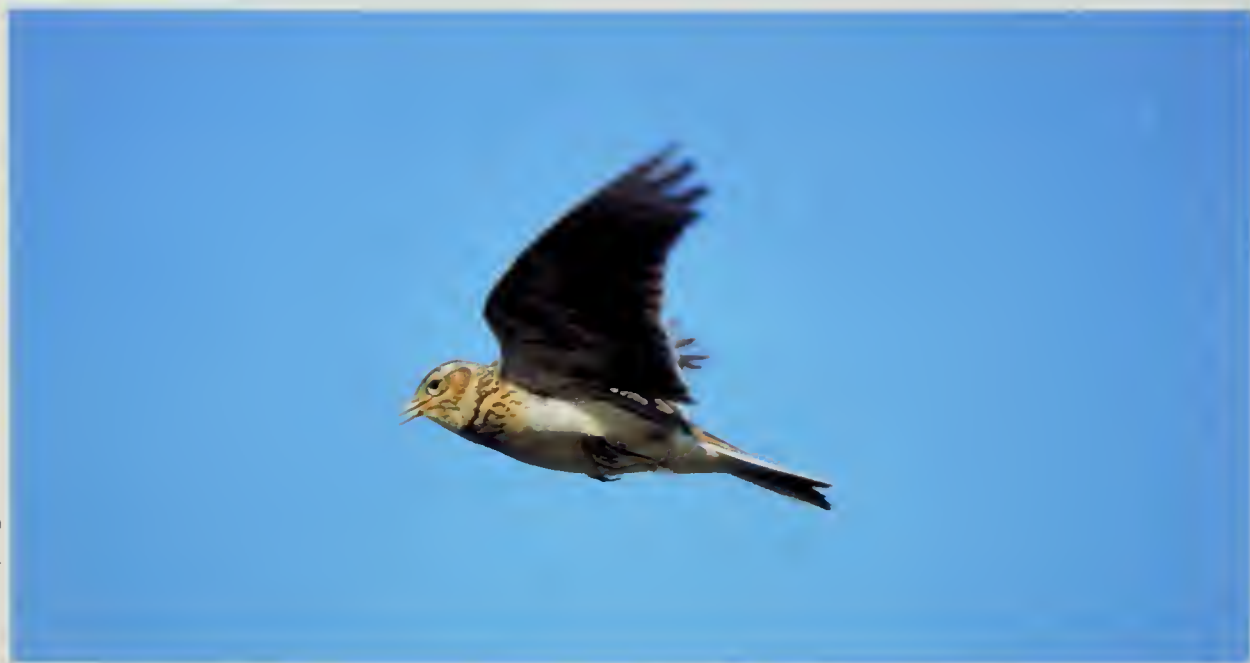
The distribution of Sky Larks was similar to that of Lapwings, with birds being widespread in England, but present in Wales and the south-west only near the coast. Flocks peaked at 500-700 birds but at least half the reported *Winter Walks* flocks numbered four or fewer. Larger flocks were reported from *Casual Records*, partly owing to the cutoff at 20 individuals, but probably also owing to the difficulty of recording this skulking species when walking a set route. Reporting rates increased in late winter, as shown earlier (fig. 2a). Approximately half of all Sky Larks were associated with stubble fields: 70-80% of these were on cereal stubbles (the commonest stubble type) with fewer on stubbles of bean, linseed, oilseed rape, maize, sugar beet or turnips. Crops accounted for up to 18%

of records, of which about 75% were on cereal crops and 10-15% on oilseed rape crops. Only about 10% of birds were on grass fields. Minor regional differences were evident: the proportion of birds on stubbles varied from 32% in East England to 73% in Scotland, while the use of grass peaked in Scotland and that of bare till peaked in Wales.

Fieldfare

Fieldfares were widespread, with perhaps more records in central and western England than in the east (fig. 3d). Although some large flocks of Fieldfares were reported, with maxima being 1,950 from *Casual Records* and 5,000 from *Winter Walks*, 50% of flocks numbered fewer than 15 individuals. Reporting rates indicated a decline in reporting through the winter. If Fieldfares were moving out of farmland, they might have been moving into gardens instead and thus boosting numbers there, yet trends in gardens matched those on farmland, even across winters: in 2000/01 Fieldfares were scarce both on *Winter Walks* routes and in gardens up until midwinter before they increased.

Nationally, boundary habitats, mostly hedgerows and trees, were most important, accounting for 34% of birds. Grass accounted for 13-26% of birds, crops 15-25% and stubbles 7%. Of those on crops, 80-96% were on cereals



66. Survey results showed that about half of all Sky Larks *Alauda arvensis* recorded were associated with stubble fields, and, of these, most (up to 80%) were on cereal stubbles.

(the remainder being oilseed rape and bean crops), while cereals, maize and sugar beet were the most frequently used stubbles. Interestingly, the percentage of Fieldfares on boundary habitats during *Winter Walks* declined from 37% in November, through 27% in December to 16% in January before increasing slightly to 21% in February. Was this indicative of birds depleting the hedgerows of berries, or a more profitable habitat becoming available elsewhere?

Tree Sparrow

Tree Sparrows were patchily distributed, absent from much of Scotland and Wales (although there were few observers here), but also rarely encountered in East Anglia, southern coastal counties or the southwest (fig. 3e). Flocks numbered up to 100-200 birds but 75% of flocks numbered ten individuals or fewer and there were no significant seasonal trends in either reporting rate or abundance. True to their name, 25-50% of Tree Sparrows were associated with hedges and trees. Only 4-7% were associated with crops, and the type of crop differed between the two surveys: *Casual Records* found 43% of crop associations to be with linseed crops (which is particularly noteworthy given that linseed is not a common crop) and 22% with cereals, while *Winter Walks* found 58% with cereals and 24% with maize. Overall, 17% of Tree Sparrows were associated with stubbles, mostly cereal (86% from *Casual Records*) and sugar beet stubbles (54% from *Winter Walks*).

Compared with House Sparrows *P. domesticus*, far fewer Tree Sparrows were associated with farmyards (25% and 3-5% respectively).

Discussion

In their own right, *Winter Walks* and *Casual Records* have given interesting insights into the ecology of farmland birds in winter. They show that, despite agricultural changes, Britain's farmland is still used by significant numbers of birds in winter, but that there are causes for concern. Some of our granivorous species are becoming extremely scarce in winter and this mirrors the trends apparent during the breeding season. Species such as Tree Sparrow, Corn Bunting and even House Sparrow were reported from far fewer *Winter Walks* routes than one might have expected two decades earlier. Some species are becoming so scarce that understanding their ecology from rigorously controlled surveys is difficult because so few are likely to be found in randomised squares. For such species, broad participation surveys such as *Casual Records* and *Winter Walks* may be the only way of amassing information on a large scale.

Despite the limitations of coverage achieved by *Winter Walks*, it is still possible to compare the distribution maps presented here with those from the *Winter Atlas* (Lack 1986). For Grey Partridge, Sky Lark, Fieldfare and Tree Sparrow the extent of the distributions derived from *Winter Walks* and *Casual Records* were broadly

similar to those in the *Winter Atlas*. Yet there were perhaps more gaps in the Grey Partridge and Tree Sparrow distributions. These 'gaps' in range could be due to incomplete coverage of these areas compared with the more thorough fieldwork of the *Winter Atlas*, but such losses are also reported by county bird reports and, furthermore, match well-documented losses in the breeding season (Gibbons *et al.* 1993). These surveys also suggest that proportionally more Lapwings and Fieldfares winter in the east than was the case in the early 1980s. This is perhaps because recent winters have tended to be mild and lacked prolonged periods with frozen ground which might normally force these species to seek refuge and milder conditions farther south and west.

One drawback of simple surveys such as *Winter Walks* and *Casual Records* is that it is difficult to collect detailed information about the habitats used in relation to their availability. In addition, differences in detectability, both between species and between habitats, confuse actual patterns of habitat use. Nonetheless, some comparisons can be made. For instance, though 14% of Sky Larks were associated with cereal crops, cereal crops account for 24% of

farmland in winter (Gillings & Fuller 2001). Moreover, over 50% of Sky Larks were associated with stubbles, despite stubbles accounting for less than 6% of farmland (Gillings & Fuller 2001). These patterns are in agreement with other extensive (Gillings & Fuller 2001) and intensive studies (Wilson *et al.* 1996; Buckingham *et al.* 1999; Donald & Vickery 2001).

Our results suggest that Grey Partridges made wide use of crops, stubbles and grass, though Wilson *et al.* (1996) and Buckingham *et al.* (1999) both demonstrated a preference for stubbles and set-aside over pasture, and the avoidance of arable crops and bare tillage. Potts (1986) described the diet of Grey Partridges in winter as consisting of weed seeds and spilt grain but also observed that they would switch to grazing pasture if seeds were lacking, which explains their catholic choices.

Lapwings showed equal use of crops and grass rather than being concentrated in grass as might be expected (Lister 1964). This is perhaps an indirect consequence of their easterly distribution. Regional specialisation of agriculture has meant that less pasture exists now in eastern Britain and then usually as short-rotation improved grass, which has low earthworm



Ray Tipper

67. Fieldfare *Turdus pilaris*, East Sussex, February 1991. Survey results suggested that these northern thrushes were encountered less frequently in late winter than earlier in the season. Boundary habitats, in particular hedgerows, were found to be important and, perhaps as reserves of berries were depleted, the birds moved on, to new habitats or areas.



68. Fersfield, Norfolk, December 2001. Winter is a critical time for farmland birds. For many species of conservation concern, decreased overwinter survival is likely to be a major factor underlying recent population declines. Therefore, understanding the habitat requirements of these species in winter is a crucial first step in reversing declines.

abundance (Edwards & Bohlen 1996; Vickery *et al.* 2001) and probably presents poor feeding opportunities. Many birds were associated with standing water on agricultural fields and this is probably because field flooding can produce a temporary resource of drowned earthworms.

Not surprisingly, most Fieldfares recorded were associated with hedges. Within fields, more were associated with grass than with crops, reflecting the species' distributional bias towards pastoral and mixed farming landscapes (fig. 3d). Wilson *et al.* (1996) and Perkins *et al.* (2000) showed that Fieldfares were more likely to occur on grazed than ungrazed pastures. This could be because sheep produce a tightly cropped sward which may in turn facilitate detection of earthworm and tipulid prey. Detailed questions such as these, relating habitat use to both availability and habitat management, will be addressed by the random square survey and other BTO studies.

For some species (e.g. Sky Lark), the results of *Casual Records* and *Winter Walks* supported results from local and intensive studies of abundance and habitat use, and suggested that they may reflect more general patterns. For some species, regional results differed from those of previous studies (e.g. Lapwing). These surveys

have also provided new information on distribution and abundance which, alongside the random square survey, should enable us to consider shifts in range and local losses of farmland bird populations in relation to agricultural land management. *BB* subscribers and BTO members have further shown how amateur birdwatchers can provide an invaluable resource with which we can investigate the ecology of farmland birds and use the results to inform conservationists and decision-makers.

Acknowledgments

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69. Results showed that the distribution of Tree Sparrows *Passer montanus* was patchy, this species being largely absent from the southwest, counties along the south coast and much of East Anglia, despite relatively good survey coverage.

The 'North American' Peregrine Falcon in Britain

A review on behalf of the British Ornithologists' Union Records Committee

Andrew H. J. Harrop

ABSTRACT The BOU Records Committee has reviewed two previously accepted British records of 'North American' Peregrine Falcon *Falco peregrinus anatum*. The first was alleged to have been obtained in Leicestershire in October 1891, and the second was caught in Lincolnshire in September 1910. Neither record was found to be acceptable. Consequently, this form has been removed from the British List.

The 'North American' Peregrine Falcon *Falco peregrinus anatum* (Bonaparte) (hereafter referred to simply as *anatum*) was included as a scarce visitor in the sixth edition of the *Checklist of Birds of Britain and Ireland* (BOU 1992), on the basis of records from Leicestershire in 1891 and Lincolnshire in 1910. Cramp & Simmons (1979), however, suggested that records of *anatum* from the Western Palearctic should be reviewed to take account of the newly described subspecies *F. p. tundrius* (White 1968).

Taxonomy

The geographical variation of such a cosmopolitan species as the Peregrine Falcon is, not surprisingly, complex. Ferguson-Lees & Christie (2001) recognised 16 races, of which three (*tundrius*, *anatum*, and *pealei*) are native to North America. Of these, *tundrius* occurs on the tundra and arctic islands of North America and Greenland and is highly migratory; *anatum* occurs south of the tundra, its breeding range stretching as far as north Mexico, and migrates to Central America; and *pealei* occurs from the Commander Islands across the Aleutians to Alaska, and western coastal North America south to British Columbia, where it is only par-

tially migratory. The tundra form was first described by White (1968), who found that the Peregrines of the North American tundra comprise a well-defined and biologically distinct race. Compared with the two other North American races in juvenile plumage, *tundrius* is on average smaller, with more extensive pale supercilia and pale streaking on the crown, broader and paler fringes on the upperparts, less heavily marked underparts (especially on the breast, belly and vent), and narrower black moustaches. In terms of size, *anatum* and *pealei* are similar, but the former is heavily marked on the breast with extensive orange-buff tones on the underparts, while the latter is the darkest of the three, especially on the underparts, which lack the strong orange-buff tones shown by *anatum* (plate 70). In particular, White discovered that the migratory pattern of *tundrius* is significantly different from that of most North American Peregrines, which show a leapfrog pattern of migration. Those from continental taiga areas and southern Greenland, however, tend to move over the resident Peregrines and winter as far south as Central and South America.

Nesje *et al.* (2000) found a strong phylogeographic structure to Peregrine populations,

reflected by genetic divergence, and showed that New World and Old World Peregrines appear to be clearly genetically divergent. Nonetheless, those assessing any future claims of North American forms may need to take account of the practice of using a mix of different races in repopulation programmes in some parts of the United States, and also of the importation and breeding of non-native races of Peregrine for falconry in Britain (R. Wilkinson *in litt.*).

The British records

Newbold Verdon, Leicestershire,

31st October 1891

At a meeting of the British Ornithologists' Club held on 14th June 1911, Mr E. Bidwell exhibited a very dark Peregrine said to have been shot by Mr W. Whitaker at Newbold Verdon, near Market Bosworth, Leicestershire, on 31st October 1891. The bird was examined by Mr W. R. Ogilvie-Grant, who considered it to be a specimen of the dark North American race named *Falco nigriceps* (Cassin) (*Bull. B.O.C.* 27: 103). A black-and-white photograph of the specimen was published in *British Birds* in 1912 (*Brit. Birds* 5: 220), and is reproduced here (plate 71). The bird is mounted on a moss-covered log and appears to be in worn juvenile

plumage. The upperparts are notably dark, any pale fringes having been worn away. The chin and throat are pale and contrast markedly with the rest of the underparts, which are heavily marked, and on which the most distinctive feature is formed by large pale 'notches' on the otherwise dark feathers on the lower flanks. Having examined both skins and photographs, it is clear that this feature is typically shown by *F. p. pealei*, as are the almost completely dark leg feathers, which have narrow pale fringes (Wheeler & Clark 2003).

An attempt was made to locate the specimen, which was believed to be at the Mansfield Museum (Palmer 2000). Although entry 127 in the 'Catalogue of birds in original museum collection (not of Whitaker collection)' states that it is a male, shot at Newbold Verdon, Leicestershire, on 31st October 1891, the bird now on display is clearly not the original Leicestershire specimen and appears to be a juvenile Peregrine of the nominate form (plate 72). The acquisition card states (in pencil): 'Mr G. Freeman: 1953?'

BOURC was, therefore, left in the position of not being able to study the original specimen, presumably because it had been lost or exchanged. The published photograph of the



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70. Specimens of Peregrine Falcons *Falco peregrinus* in the Natural History Museum, Tring. From left to right: *calidus* from eastern Siberia; the 1910 Lincolnshire specimen (see text); *peregrinus* from Norfolk; *anatum* from Guatemala; and *pealei* from the Aleutians.



71. Peregrine Falcon *Falco peregrinus* reported as shot at Newbold Verdon, Leicestershire, on 31st October 1891. Reproduced from *Brit. Birds* 5: 220.

specimen appears to show either *anatum* or *pealei*, but the Committee was unwilling to accept it for three main reasons. First, it is not identifiable with absolute certainty as a particular race, so it is not acceptable for inclusion on the British List; furthermore, the specimen most closely resembles *pealei* (an unlikely vagrant). Second, it seems not to have been exhibited until 20 years after the reported date of collection, so it is difficult to be confident about its provenance. Third, although the specimen does appear to have been in its second calendar-year when killed, its plumage does not correspond with the reported date of collection, unless it moulted exceptionally late, as there is no sign of any newly moulted adult feathers: a worn juvenile is more likely to have been collected early in its second calendar-year.

Humberstone, Lincolnshire, 28th September 1910

On 28th September 1910, a large falcon was netted by one of the men engaged in catching



72. Specimen of Peregrine Falcon *Falco peregrinus*, apparently a juvenile of the nominate race *peregrinus*, now on display in the Mansfield Museum, and claimed to represent the 1891 Leicestershire record of 'North American' Peregrine Falcon.

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plovers at Humberstone on the Lincolnshire coast. It resembled a large, dark-coloured Peregrine, and measured 20 inches (51 cm) in length with a wing length of 14 inches (35.5 cm). It was sent to Dr E. Hartert, who considered it to be of the American form *Falco peregrinus anatum*. The specimen is now in the Natural History Museum, Tring, where it is stored as a cabinet skin (registration number 1938.3.19.1). It is a large juvenile Peregrine which has quite a narrow moustache and is heavily marked on the breast. Hartert also examined the Leicestershire specimen, and considered that too to be *anatum*, though he did not exclude the possibility that it might be *F. p. pealei*.

On examination, however, the Lincolnshire specimen (plate 73) was found to match neither *anatum* nor the two other North American subspecies. Although there is wide individual variation in Peregrine plumages, by comparing a large sample of specimens directly it is possible

to discern consistent patterns and draw conclusions. The main differences from typical *anatum* are as follows: its cheeks are basally white without any buff tones; it lacks strong orange-buff fringes on the underwing-coverts, breast and belly; and similarly, it lacks orange-buff fringes on the upperparts (most notably on the uppertail-coverts). The possibility that it might be *F. p. calidus*, a potential vagrant from east of Lapland, was also considered. When examined in series, *calidus* shows a clinal tendency to darken from west to east: birds from the western part of the range (presumed to be the most likely potential vagrants to Britain) are normally paler than the Lincolnshire specimen, especially on the lower belly, vent, flanks and undertail-coverts. In fact, the Lincolnshire specimen's plumage and measurements were found to fall within the range of variation of nominate *peregrinus* (plate 70) and, consequently, it was also considered not acceptable as *anatum*.

The likelihood of natural occurrence in Britain

Since the only accepted Western Palearctic records of *anatum* were the two from Britain, there are no longer any accepted records of vagrant 'North American' Peregrines to the eastern North Atlantic. On the basis of evidence from Greenland (Lyngs 2003), male *tundrius*, which migrates from Greenland to South America south of the equator, would be the Nearctic Peregrine most likely to occur in Britain. Its range and movements are similar to those of the nominate race of Merlin ('Taiga Merlin') *Falco columbarius columbarius*, a taxon which has been demonstrated to occur in Europe (Garner 2002).

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Mark Adams and Robert Prŷs-Jones kindly arranged access to skins at the Natural History Museum, Tring, and answered queries; Linda Birch at the Alexander Library, Oxford, helped with references; and members of BOURC commented on the file and on a draft of this short paper.

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73. Specimen of Peregrine Falcon *Falco peregrinus*, formerly considered to be of the American race *F. p. anatum* but apparently a juvenile of the nominate race *peregrinus*, caught at Humberstone, Lincolnshire, in September 1910. Now in the Natural History Museum, Tring.



Displaying Swinhoe's Snipe in eastern European Russia:

a new species for Europe

Vladimir V. Morozov



74. Open forest of Siberian Spruce *Picea obovata*, Yengane-Pe ridge, Polar Urals, in northeast European Russia, June 2002. This shows the area where a male Swinhoe's Snipe *Gallinago megala* was observed displaying, as described in the text. The site is some 30 km west of the watershed of the Polar Urals, and thus lies within the Western Palearctic.

ABSTRACT A displaying male Swinhoe's Snipe *Gallinago megala* was observed in the Polar Urals, in European Russia, in June 2002. This represents the first authenticated record of this species for Europe and only the second for the Western Palearctic. The characteristic display flight and accompanying calls are described in detail and compared with those of Pintail Snipe *G. stenura*. An attempt is also made, based largely on Russian sources, to present an accurate depiction of the currently known breeding distribution of Swinhoe's Snipe.

While carrying out fieldwork on the Yuzhnaya Mountain in the Yengane-Pe ridge, on 23rd and 24th June 2002, I observed a male Swinhoe's Snipe *Gallinago megala* performing its characteristic display flight. This location, in extreme northeast European Russia, lies 30 km west of the watershed line of the Polar Urals, at 67°08'N 65°00'E

(marked × on fig. 1 opposite), and thus within the boundary of the Western Palearctic. The most likely confusion species, Pintail Snipe *G. stemura*, was a common breeder in the area, which allowed a direct comparison between the two species on several occasions. Pintail Snipe is a species I know well from observations made over many years at various localities in Russia,

including sites within the Western Palearctic (the Polar Urals and the Bol'shezemel'skaya tundra; see Morozov 1993, 1996). Prior to this record, the westernmost site where Swinhoe's Snipe had been recorded in Russia was on the Irtysh river (Yudkin *et al.* 1997; Ryabitsev 2001), which lies some 800 km SSE of the point where these observations were made. This record represents the first for the Polar Urals, the first for the Ural mountain region as a whole, and the first for Europe.

Identification

In their detailed review of the identification of Swinhoe's and Pintail Snipes, Leader & Carey (2003) did not discuss the vocalisations of displaying male Swinhoe's Snipe. These are, in fact, diagnostic, and, when combined with the pattern of display flight, provide the most reliable means of separation from Pintail Snipe in the field. Here, I present details of my observations on Yuzhnaya Mountain, and draw attention to key differences in calls and display between the two species.

Swinhoe's Snipe

On the evenings of 23rd and 24th June 2002, I observed a male Swinhoe's Snipe performing display flights. The bird was flying over sparse, open, Siberian Spruce *Picea obovata* forest and keeping to areas with extensive bogs and grassy glades with willow *Salix* scrub. The display flight followed a regular pattern: following a steep

descent, the bird would then ascend slowly in a series of 'steps'. At the top of each 'step', the bird would glide with wings outstretched and motionless, whereas the angled ascent of each 'step' was accomplished in active sculling flight with rapid wingbeats. Having thus ascended to about 30-40 m, it would fly in wide horizontal circles or loops, alternating between active sculling flight and gliding on widely spread wings. Periodically, it gave a series of calls, transcribed as 'kkhryu-kkhryu-kkhryu-kkhryu'. Having circled in this manner for 1-2 minutes, the bird would descend on a fairly steep, arc-like trajectory to a height of about 10-12 m above the ground. The descent was rapid and on half-closed wings, with periodic bursts of shallow wingbeats. The tail feathers were widely spread during the descent and a low humming sound was emitted from the vibrating outermost rectrices. Having reached the low point of its dive, it would shoot up again at an angle of about 60° to the ground, spreading and slightly bending the wings at the 'elbow' (carpal) and 'wrist' joints, and gliding with them held in this position. At the same time, the bird gave its characteristic 'kkhryu-kkhryu-kkhryu-kkhryu' call. This same call was transcribed by Ryabitsev (2001) as 'striki-strik-kr-kr striki-stri striki-tiri', and by Mauersberger *et al.* (1982) as a peculiar rapid twittering 'zschiwitschiwit'.

Pintail Snipe

The male Pintail Snipes employed a similar



Fig. 1. The breeding distribution of Swinhoe's Snipe *Gallinago megala*, with observations well beyond the main established range marked and numbered (1-5), plus one (X) which lies within the boundary of the Western Palearctic, described in detail in the text. This represents the first European record of Swinhoe's Snipe. The green line delineates the Western Palearctic boundary.

ascent phase in their display flights, also using a series of 'steps' to gain height (following a plunging descent) and reach a plateau, typically at a height of 70 m or more. At this point, a male would deliver sharp, abrupt and regularly repeated calls, likened to 'zhzhik' or 'zhzheek', while flying in a wide arc and alternating between gliding on outstretched wings and bursts of shivering wingbeats. During this period, the rate of the 'zhzhik' call gradually increased, being followed by a steep, plunging descent in the form of a wide arc. In the initial phase of the dive, the male uttered the 'zhzhik' call, constantly increasing the delivery rate so that the individual calls changed within a second or two into a continuous buzzing whistle, described as 'zhzhik-zhzhik-zhik-zhik-zhzhii-zhzhii-shchshchiiishchshchiiiii'. This buzzing whistle, in turn, merged with, and was then replaced by, a humming sound produced by the fanned tail feathers. The sound emitted by the outermost rectrices has a different timbre from that produced by Swinhoe's Snipe, being higher in pitch and more monotone. During the diving descent, the wings of male Pintail Snipe are three-quarters closed and motionless, resulting in the speed of the descent being faster than the corresponding phase in the display of Swinhoe's Snipe.

The male Pintail Snipe pulls out of the dive by ascending in a manner similar to, or even more steeply than, Swinhoe's Snipe, and opens its wings in like fashion, but in such a way that the plane of the elbow joint forms an acute angle with the line of the body, while the plane of the wrist and elbow joints forms an obtuse angle. Detailed descriptions of this song, along with sonograms and other illustrations of the display flights of Pintail Snipe and/or Swinhoe's Snipe can be found in Cramp & Simmons (1983), Königstedt (1986), Byrkjedal (1990) and Ernst (1992, 1994), while sound recordings are presented by Veprintsev (1982) and Mild (1987).

Previous records of Swinhoe's Snipe in the Western Palearctic

There are two previous published records of Swinhoe's Snipe in the Western Palearctic. The first concerns a bird in the Northern Caucasus on 20th December 1898 (Boehme 1926). Although the bird was collected, Boehme did not actually examine the specimen and the identification was made on the basis of a

description provided by the owner of a taxidermy workshop who had examined the bird. As the skin was not preserved, it is no longer possible to establish whether the identification was correct, and Snow & Perrins (1998) concluded that this record must be considered dubious.

Then, in 1998, a bird identified as a Swinhoe's Snipe was present in the Hula valley, northern Israel, from 28th February to 4th March (Shirihai 1999). The identification was based solely upon field observations, with no supporting photographs. This record has been accepted by the Israeli Rarities Committee, but Leader & Carey (2003) – who suggested that the separation of Swinhoe's and Pintail Snipes has been oversimplified in the literature, and that most individuals are not safely separable in the field owing to the overlap in size, structure and plumage – considered that, based on the description published in Shirihai (1999), the possibility of Pintail Snipe could not be excluded.

Breeding range

Almost the entire breeding range of Swinhoe's Snipe lies within Siberia and the Russian Far East, but it also extends locally into Mongolia (Stepanyan 1990; del Hoyo *et al.* 1996; fig.1). It is disjunct, being divided into two parts. The larger part of the breeding range extends over an area from the foothills of the Altai Mountains and the Middle Ob' river in the west to the Upper Angara depression and southwestern Transbaykalia in the east. In the north, the range encompasses the valley of the Ob' and the Nizhnyaya Tunguska to the western foothills of the Altai, and is reported to extend north to about 62°N in the Ob' valley and 63°N on the upper reaches of the Taz and in the Yenisey valley (Ryabitsev 2001). In Mongolia, it breeds in the southwestern Hentey Mountains (Chentejn Nuruu), where Kozlova (1932) reported finding a nest with eggs. Breeding is also believed to occur in the valley of the Kobdo river (47–48°N 90–92°E), which rises on the northeastern slopes of the Gobian Altai and empties into the Har Us-Nuur, although this was considered doubtful by Fomin & Bold (1991).

The eastern part of the breeding range lies in the Lower Amur valley north to its estuary, the Ussuri basin and Primor'ye (Ussuriland) (Kozlova 1962; Stepanyan 1990; Babenko 2000).

Leader & Carey (2003) omitted this part of the breeding range from their distribution map, presumably owing to lack of data, but identified it as a possible breeding area. In fact, indisputable evidence of breeding by Swinhoe's Snipe in Ussuriland was published by Shul'pin (1936) and Spangenberg (1940), who described the discovery of nests with eggs and unfledged young at Dormidontovka in the lower Ussuri river basin (47°43'N 134°52'E), on the Iman river and also along the middle reaches of the Lefu river in the Lake Khanka basin. As yet, there is no evidence of breeding on Sakhalin and just one vagrant record for the island was considered acceptable by Nechaev (1991) (specimen held in the Zoological Institute collection, St Petersburg).

The western limits of the breeding range are known only superficially. Leader & Carey (2003) show this reaching the Irtysh river in the steppes of the Pavlodar Region (northern Kazakhstan), but this is not an accurate representation of the known breeding distribution (see fig. 1). According to Ryabitsev (2001), the western limit runs southeast to northwest between the Irtysh and Ob' rivers, from the western foothills of the Altai to the Irtysh valley, crossing the Altai and Novosibirsk Regions and the extreme north of the Tyumen' Region. The limit crosses the Irtysh valley just south of the administrative border of the Khanty-Mansiysk Autonomous Region, after which it turns sharply eastwards and runs straight on to the Yenisey.

The westernmost areas where Swinhoe's Snipe breeds regularly lie in the south and east of the Tomsk Region and adjoining districts of the Novosibirsk Region, within the subzones of the southern taiga and subtaiga forests. In the middle taiga belt, Swinhoe's Snipe is a regular breeder in the Yenisey valley to 61°N. Based on Ravkin (1978), Vartapetov (1984), Rogacheva (1992) and Bobkov *et al.* (1997), the northwest limit of the regular breeding range is more accurately described as running between 56°30'N 78°00'E in the Novosibirsk Region and 61°00'N 88°00'E in the Yenisey valley. Farther west, other localities from which the species has been recorded, and through which the western range limit may lie (Ryabitsev 2001), are, in fact, remote from the main breeding range and breeding has not yet been proven there. These include the following records (marked 1-4 on fig. 1):

- 1) Near Batovo, in Khanty-Mansiysk district, at 60°25'N 69°50'E, in 1981 (Yudkin *et al.* 1997).
- 2) The valley of the Negus'yakha river, at 60°00'N 74°00'E, in 1991 (Strel'nikov & Strel'nikova 1997).
- 3) The Vakh floodplain, 20 km northeast of Nizhnevartovsk, at 61°00'N 77°00'E, in 2000 (Shor & Bobkov 2000).
- 4) North of Busly lake in the Bol'sheukovsk district of the Omsk Region, at 56°29'N 72°45'E, in 2000 (Kalyakin *et al.* 2000), although this record is omitted by Ryabitsev (2001).

Leader & Carey (2003) mistakenly described Pintail Snipe as a vagrant to the Western Palearctic, although their map for this species correctly depicts the breeding range extending into the Western Palearctic, in eastern European Russia and the Polar Urals. In fact, Pintail Snipe regularly breeds within the Western Palearctic, albeit within a restricted range in the north-eastern region of European Russia, from the Bol'shezemel'skaya tundra and Yugorskiy Peninsula east to the Polar Urals (Cramp & Simmons 1983; Estaf'ev 1991; Morozov 1996, 1998; Hagemeijer & Blair 1997; Snow & Perrins 1998).

Discussion

Although Swinhoe's Snipe is probably best treated as a vagrant to the Polar Urals, its periodic occurrence beyond its main breeding area can be interpreted as the initial stages of range expansion in a westerly and northerly direction. In this context, it is interesting to note that, also in 2002, V. G. Vinogradov (2002) observed a presumed Swinhoe's Snipe some 80 km from the mouth of the Russkaya river, at 67°15'N 82°06'E (marked as point 5 on fig. 1). This location is considerably farther north than the range limit drawn by Ryabitsev (2001) on the upper reaches of the Taz river (63°N). This male snipe was displaying over floodplain forest and, when it landed on the treetops, it gave the chirring 'strik-strik' calls that Ryabitsev (2001) considered characteristic of Swinhoe's when displaying on the ground, on a perch, or in flight.

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Canvasback in Kent: new to Britain

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ABSTRACT A male Canvasback *Aythya valisineria* was recorded at Cliffe, Kent, on 7th December 1996. This has now been accepted as the first record for Britain; it preceded a more settled, and much more widely observed bird in Norfolk in January 1997. To date, there have been five further accepted records of Canvasback in Britain, which presumably reflects a considerable population expansion on its North American breeding grounds.

At 14.30 hrs on 7th December 1996, PL was carrying out a recce of the North Quarry pools at Cliffe, Kent, in preparation for a Wetland Bird Survey count there the following weekend. Almost immediately after having begun to count the diving duck present, he came across an *Aythya* duck with a similar plumage pattern to the accompanying Common Pochards *A. ferina* (hereafter 'Pochard') but with a noticeably different structure. This bird was approximately 25% longer than Pochard, appeared both bulkier and longer-necked, and displayed an entirely black bill, which was of a different size and shape from that of Pochard. Furthermore, even in the dull light, the body was noticeably paler than on the male Pochards. PL's initial, somewhat shocked, reaction was that the bird was a male Canvasback *A. valisineria*! Having previously studied both Canvasbacks and Redheads *A. americana* in captivity in the hope of one day finding either species among Pochards on this side of the Atlantic, here now was an opportunity to see a North American vagrant in a wild situation!

About half an hour after the initial discovery, DM arrived and together we made detailed observations of the bird until dusk. We were acutely aware of the pitfalls of a hybrid *Aythya* resembling a pure Canvasback, and thus paid particular attention to the bill. We could detect no suggestion of pale markings, however; indeed, the bill appeared to be that of a classic Canvasback! Despite its distinctive appearance, the bird could at times be difficult to pick out within the Pochard flock, as it frequently tucked

its head in and appeared to sleep. We watched it until the light faded completely; subsequent searches of the area over the following days failed to relocate it, and the bird was not seen again.

Despite its rarity, we were unable to release the news to anyone other than the North Kent Recorder, as the site owners had specifically instructed that news of rare birds should not be released. This was primarily because North Quarry is a working quarry and subject to the regulations contained within the Health & Safety at Work Act (1974). Therefore, the presence of large numbers of birdwatchers visiting the site might have resulted in damage, accident or injury, and left the owners liable to prosecution.

Description

Head and neck

Head essentially red, but browner in tone than on the accompanying Pochards. A darker area ran over the crown to the rear of the head, round below the cheek to the throat. The feathering between the bill base and the eye became much darker, almost black, making it sometimes difficult to establish where the feathering ended and the bill base began.

The head shape was clearly different from that of Pochard, with the highest point of the head behind the eye, and a steep, but flattish slope down the nape. The forehead merged smoothly into the bill in a long 'ski-slope' curve. The neck was long, perhaps relative to Pochard as Pintail *Anas acuta* is to Mallard *A. platyrhynchos*. This was particularly noticeable when the bird made a neck-stretching display (presumed to be aggressive) to the Pochard.

The neck was more evenly thick than on Pochard, which gave it a more muscular appearance, and similar in colour to the paler areas of the head, slightly darker to the rear. When relaxed, the head was held in a more 'swan-like' posture than on Pochard.

Body

The body was basically similar in pattern to that of Pochard: breast black, with pale grey mid-body and black stern. It was about 25% larger than Pochard, perhaps approaching the size of a female Mallard, and when seen out of the water, or diving, it was obviously bulkier than Pochard. General body shape was noticeably different from that of Pochard, being deeper in the back and with the centre of gravity appearing further forward. This was particularly obvious when the tail was depressed, giving an attenuated appearance to the rear. The body was also broader-beamed than that of Pochard.

When viewed from the side, the outline of the breast had a noticeable curve, particularly when the head was retracted. In contrast, the Pochards had a straighter, more vertical profile.

Upperparts and flanks greyish-white, paler than on Pochard, and generally appeared concolorous. Occasionally, the upperparts seemed a little darker than the flanks, but this may have been an effect created by the different way the feathers were lying. No vermiculations were visible. The tertials were slightly darker than the rest of the upperparts, forming a darker triangle. The tail, when cocked, was longer and more prominent than that of Pochard, and showed a grey margin, darker than the flanks, similar in tone to the tertials.

When viewed head-on, the black area on the breast was proportionately narrower than on Pochard, with the flanks appearing as prominent pale panels on either side (unlike Pochard). When seen out of the water, the lower breast had a slightly ill-defined edge. The black stern seemed similar in extent and pattern to that of Pochard.

Wings

Underwing uniformly pale greyish-white, perhaps paler than the flanks. The upperwing differed from that of Pochard in several ways. The bulk of the forewing was greyish-white, similar in tone to the flanks but darker than the mantle (and paler than on Pochard). The primary coverts appeared darker than the scapulars. The outer primaries appeared darker when the wing was partially open than when the wing was spread, so possibly only the outer webs were darker. The inner primaries showed only darker tips, the darkness of the feather tips gradually fading onto the secondaries.

The primary coverts and the remainder of the greater coverts formed a tapering dark line along the mid-wing. The secondaries were basically similar in tone to the rest of the pale wing-coverts. The bird was full-winged.

Bare parts

Bill blackish, long and deep-based, and slightly reminiscent of Common Eider *Somateria mollissima*. The bill was studied particularly carefully, and from different viewing angles, to confirm that there were no pale areas present. Both legs were seen several times while the bird was preening. They were grey in colour and the bird was unringed. The eye was similar in colour to that of Pochard, although perhaps a little darker.

General behaviour

Generally, the Canvasback behaved in a similar fashion to the accompanying Pochards, and dozed between periods of preening and diving. Although associating with the Pochards, it appeared to be dominant over them. At one point, on the close approach of a Pochard, the Canvasback stretched its head forward with bill open in what was assumed to be a show of aggression, and the Pochard gave way. On a separate occasion, it repeated this behaviour towards a Pochard that was preening on a half-submerged branch. As the Pochard retreated, it took over this perch and began to preen itself. While preening, it also raised and stretched its wings, allowing the upperwing and underwing to be inspected. When diving, it jumped out of the water more powerfully than the Pochards, resulting in the head and tail being clear of the water at the same time. In general, the Pochards made much shallower dives.

Discussion

After returning home, PL and DM checked their observations against several references. Of these, the most useful was Madge & Borrow (1991), who noted that one of the distinguishing features is that the grey flank of Canvasback forms a sloping line at the front while that of Pochard is more vertical. This was not noted specifically at the time, but appears on PL's original field sketch.

Although we felt that the identification was not in doubt, the age of the bird had yet to be determined. Consequently, in January 1997, PL visited the WWT at Arundel, West Sussex, to view the captive Canvasbacks held there, and to seek advice on ageing the species. A subsequent visit was made to the WWT at Llanelli,

Carmarthenshire (now the National Wetlands Centre Wales), and advice was also sought from the USA via the *ID Frontiers* internet discussion group. The information obtained suggested that, by December, adult males have completed the moult from eclipse and are in full breeding plumage; first-winter males, although variable, generally appear similar to adult males, but the following features may be useful in distinguishing them:

- The body and mantle are a darker shade of grey, with those of adults appearing 'almost white'. This phrase kept appearing when the body and wings of adult drakes were described.
- The tertials are darker on first-winter males than on adults, although some birds can moult these by December. These darker tertials contrast with the paler body plumage.
- The upperparts of adult males, including the mantle, wings and flanks, appear entirely 'white'. Any male with dark feathering on the upperwing is a first-winter. This feature is variable, however, and first-winters can range from having entirely brownish, female-type wings to just a few retained dark feathers.

Photographs of upperwings, used as a guide to ageing this species during census work for the US Fish and Wildlife Service, were obtained. These confirmed that the primary coverts on both adult and first-winter males are dark. On adults, the lesser, median and greater coverts appear pale, 'almost white', the dark tips to the flight feathers are restricted to the primaries and the outermost secondaries, and the outer webs of the primaries appear paler when compared with those of first-winter males. In contrast, only first-winter males show any dark

feathering on the lesser, median and greater coverts, the dark tips to the flight feathers extend from the primaries well onto the secondaries, and the outer webs of the primaries appear obviously darker than the remainder of the wing.

Based upon the following criteria, we believe that the Cliffe Canvasback was a first-winter male:

- The mantle, scapulars and flanks were not pale enough for an adult.
- The tertials were contrastingly darker than the rest of the upperparts.
- The upperwing was relatively dark compared with the mantle.
- The outer webs to the outer primaries were obviously dark.
- Dark tips to the flight feathers continued well onto the secondaries.

This record has now been accepted as a Canvasback by BBRC (*Brit. Birds* 96: 556), and subsequently as the first for Britain by BOURC (BOURC 2003).

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EDITORIAL COMMENT Little more than a month after the Cliffe bird was discovered, a male Canvasback, also thought to be a first-winter, was discovered in Norfolk, first at Wissington on 18th January 1997, by Carl Donner, and then (independently) at the nearby Welney WWT reserve on 21st January 1997, by John Kemp (*Brit. Birds* 92: 566; Millington 1997). This individual commuted between the two sites during January, subsequently settling at Welney, where it was last seen on 9th March. What was presumed to be the same individual reappeared at Welney on 3rd December 1997, after putting in a brief appearance at Abberton Reservoir, Essex, on 23rd-24th November (*Brit. Birds* 92: 566). This bird was seen again at Abberton on 6th-16th April 1999, 8th November 1999 to 15th February 2000 (*Brit. Birds* 93: 523), and 12th November 2000 to 13th February 2001 (*Brit. Birds* 94: 463).

Subsequently, another four individuals have been recorded in Britain to the end of 2002: a male at Monks' Wall, Kent, on 28th May 1999 (*Brit. Birds* 94: 464); a male at Lade, Dungeness, Kent, from 29th January to 14th March 2000, presumed same from 18th November 2000 to 8th March 2001 (*Brit. Birds* 94: 463-64, 95: 487); a male at Par Beach Pool, Cornwall, on 19th April 2000 (*Brit. Birds* 94: 463); and a male at Pennington Flash, Greater Manchester, on 11th-30th July 2002 (*Brit. Birds* 96: 557). Thus, although three of the birds so far recorded have turned up during the winter period, as might be expected (and two of these reappeared in a subsequent winter), there are also two records during the spring migration, plus the midsummer record in northwest England. Clearly, diving ducks are worth checking at any time of year!

Canvasbacks breed from central Alaska south through western Canada to northeast California, and east to central USA, and winter from British Columbia to the Great Lakes, and south throughout the USA to central Mexico. Being a powerful, migratory duck, and one whose breeding population increased to record levels in the mid 1990s, this was perhaps not a wholly unexpected addition to the British List. At the time of this sighting, in 1996, data from the US Fish and Wildlife Service show that the breeding population was at an all-time high, at almost 850,000 individuals (Wilkins & Otto 2003; fig. 1). This represented a dramatic increase from the ten-year period 1984-93, when the population had fluctuated between 375,900 and 539,300. With such a surfeit of young birds, it was perhaps not surprising that two vagrant Canvasbacks appeared in Britain in the autumn of 1996/97. Since then, as shown in fig. 1, population levels have declined again, and were estimated to be 557,600 in 2003, a little above the mean figure for the period 1955-2003 (Wilkins & Otto 2003).

Eric Meek, Chairman of the British Ornithologists' Union Records Committee, commented: 'The identity of the Cliffe Canvasback was clearly established from the detailed field notes taken at the time of the observation. Considerable discussion revolved around the age of the bird but once it was established, beyond reasonable doubt, that it was a first-year drake, BOURC members were in agreement that, quite possibly, the record involved the same individual as occurred in Norfolk some six weeks later. The Norfolk bird had already been accepted as the first for Britain before details of that at Cliffe had emerged. The sighting at Cliffe preceded that in Norfolk and thus replaces the latter as the first British record.'

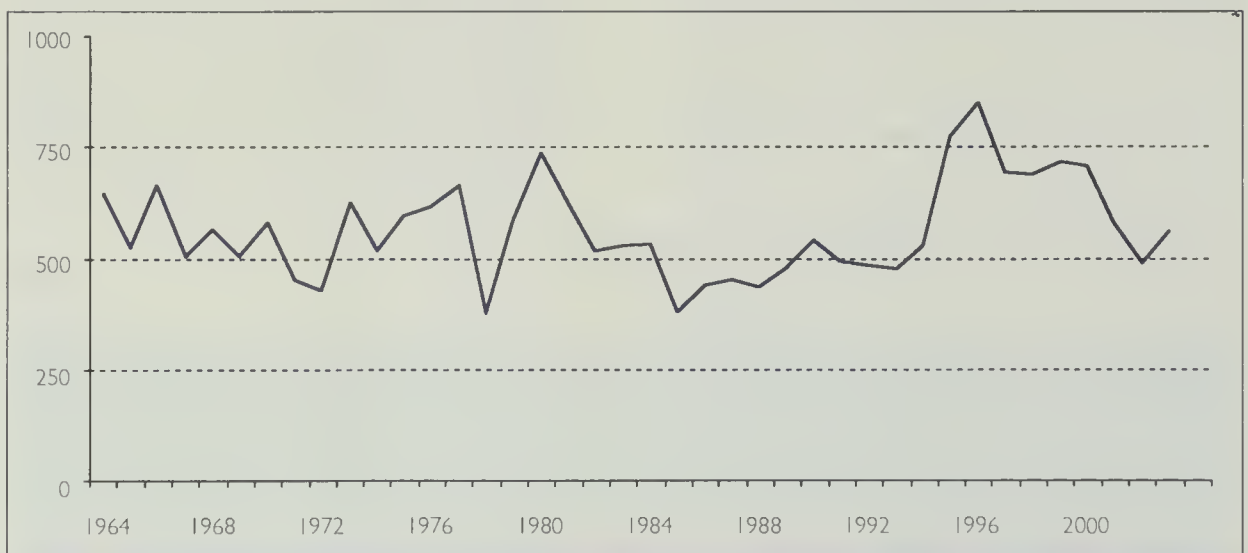


Fig. 1. Trends in the breeding population of Canvasbacks *Aythya valisineria* in the USA, as measured by the Breeding Waterfowl and Habitat Survey of the US Fish and Wildlife Service (Wilkins & Otto 2003). The graph shows the population variation (in thousands) over the most recent 40-year period. Note the population surge in the mid 1990s, peaking in 1996.



Steve Young/Birdwatch

75 & 76. Male Canvasback *Aythya valisineria*, Welney, Norfolk, March 1997. Since no photographs were obtained of the Cliffe Canvasback, we have taken the opportunity to reproduce two photos of the bird at Welney, in early 1997, where plate 76 shows it among a flock of Pochards *A. ferina*.



Steve Young/Birdwatch

Letters

English names for Western Palearctic birds

May I congratulate the Editorial Board of *British Birds* for having the courage, foresight and wisdom to take a sensible stand on the subject of changes to English bird names. One can argue forever about whether a particular name change is a good idea, but that is missing the point. Individuals will always prefer one or two 'unofficial' names to the official ones, but at least the new list bears the hallmark of common sense. The wholesale changes carried out in the 'Year Zero' revolution of 1993 angered ordinary birders for a number of reasons:

- They appeared to have been carried out unilaterally, with minimal consultation, and under the impression that once the committee spoke, the birding world would listen and follow meekly into submission. Thankfully, it did not.
- Creating artificial new names for so many common and familiar species was never going to work in practice, and instead caused confusion among birders and authors of bird guides.
- Those responsible showed a profound misunderstanding of how changes in our vernacular language actually occur, i.e. gradually, through a combination of necessity and accepted use.

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- Although some changes were needed (notably the addition of a qualifying prefix for species such as Northern Wheatear *Oenanthe oenanthe* and Barn Swallow *Hirundo rustica*), the majority were unnecessary, especially considering the existence of a unique scientific name for each species.

Please do not get the impression that I am a Luddite, resisting all change. I routinely apply a prefix to names which did not have one when I began birding, such as Grey Heron *Ardea cinerea* and Grey Partridge *Perdix perdix*. I am never tempted to refer to Robin *Erithacus rubecula* as 'Redbreast', or Goldcrest *Regulus regulus* as 'Golden-crested Wren'. And when on a pelagic trip off the California coast, I call out 'jaeger!' with as much enthusiasm as my American colleagues. But like the vast majority of British birders, I am not going to refer to 'Horned Larks' and 'Lapland Longspurs', at least not when *Eremophila alpestris* and *Calcarius lapponicus* are sitting on a beach in north Norfolk.

The new approach, based on a blend of pragmatism and common sense, deserves to succeed. And if it means we can continue to allow name changes to occur more or less naturally, rather than emerging from the compromises made by a committee, then I for one am in full support.

The revised *British Birds* list of English names for Western Palearctic birds makes a lot of sense (*Brit. Birds* 97: 2-5), though I am sure the debate on this subject is far from over. Nonetheless, it is good to see *BB* taking a lead and also offering us its recommendations on English names to use not only throughout the Western Palearctic but also worldwide. This is something that we have been awaiting for over a decade from the august International Ornithological Congress.

What do we know of the IOC's deliberations and progress? Well, sadly, very little. As long ago as January 1993, *BB* told us, when discussing English names used by *BB*, that 'Some of the names... will inevitably be changed in due course, when the IOC publishes its recommen-

dations...'. So presumably the IOC had started on this task sometime in the early 1990s.

The next we learn is from a BOU Press Release of July 1998: 'Following the pioneering work on English names carried out by the BOURC, the committee fed recommendations to the International Ornithological Congress (IOC)... to produce a coherent world list of English names which might find international acceptance... the project has been actively running for some time and there will be extensive discussions on English names at the IOC in Durban in August this year. To prevent confusion, the BOURC decided not to change any English names... The committee will be reviewing the question of English names after the IOC Congress.' That was six years ago now,

and still the IOC has not delivered, or even told us what is happening.

I know that the use of English names is only one small cog in the grand scheme of things ornithological, but as someone who communicates regularly with others to whom English is a difficult language, it would be a useful step forward to have a world list that we can all (more or less) agree on. Trying to explain to a young Arab birdwatcher the difference between Pied Avocet and Avocet (*Recurvirostra avosetta*), Winter Wren and Wren (*Troglodytes troglodytes*) might be fun but it does add a layer of confusion one could well do without. And it gets worse as you go south: Cinnamon-breasted Bunting versus African Rock Bunting (*Emberiza tahapisi*), Blyth's Grackle versus Somali Starling (*Onychognathus blythii*), and so on.

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Look at some of the standard books – for example, the *Collins Bird Guide*, BirdLife International conservation publications such as *Threatened Birds of the World*, HBW – and you will find different English names for a number of species. And there are many new works and reports in progress which would all benefit from having a list of recommended names to follow.

A published list by IOC that we can use (or choose whether to use) would be a great step forward. Those responsible for holding it up, please take note. Having to wait well over a decade is really unacceptable. Unless the IOC or its UK advisers on the West Palearctic list can persuade us they are serious in their intent, then might we not do better than encourage the use worldwide of the *BB* recommendations?

I am delighted that the current *BB* Editorial Board has reviewed the list of English names of Western Palearctic birds (*Brit. Birds* 97: 2-5) that will be used in the journal from now on. Let us hope that the BOU will follow suit, at the

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same time changing back 'Little Plover' (*Charadrius dubius*) to the original name of Little Ringed Plover, which is already used by *BB* and the vast majority of British birders.

I read with interest, and some relief, the proposed changes to the list of English names of Western Palearctic birds (*Brit. Birds* 97: 2-5), but I wonder why you have chosen to use

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'Common Redpoll' for *Carduelis flammea* and not 'Mealy Redpoll'? After all, that is what we all used to call it, and it is not at all the 'common' redpoll in the UK.

EDITORIAL COMMENT Common Redpoll *C. flammea*, as distinct from Lesser Redpoll *C. cabaret*, currently encompasses the subspecies *rostrata* ('Greater' or 'Greenland Redpoll'), *islandica* and *flammea*. The last subspecies is often called 'Mealy Redpoll', and thus our use of the name Common Redpoll, as recommended by Knox *et al.* (2001), makes it clear that the current taxonomic position is to group these three forms under *C. flammea*. Dave Emley is, of course, correct to point out that *C. flammea* is not the 'common' redpoll of the UK, but then our use of that prefix is not always entirely accurate – for example, Common Gull *Larus canus* is clearly not the most abundant gull in the UK.

Knox, A. G., Helbig, A. J., Parkin, D. T., & Sangster, G. 2001. The taxonomic status of Lesser Redpoll. *Brit. Birds* 94: 260-267.

The decline of the House Sparrow: is PVC to blame?

I read the recent article about House Sparrows *Passer domesticus* (Summers-Smith 2003) with great interest, as where I live, in the rural market town of Retford, in north Nottinghamshire, sparrows have become virtually extinct. I agree with Denis Summers-Smith that the reasons for the declines in farmland and urban sparrows are different, and that theories proposed for the disappearance of farmland sparrows are in all likelihood correct. From my observations in Retford, it appears that the decline of House Sparrows in the town cannot be explained by the rise in traffic pollution. There has certainly been an increase in the number of cats per household, but cats are never seen in the town centre; and I rarely see Magpies *Pica pica* and Eurasian Sparrowhawks *Accipiter uisus*.

Something which happened just prior to and during the decline, however, was a huge increase in the replacement of wooden fascia boards around the eaves of houses with PVC boards. The attractions of replacing deteriorating wooden boards with the maintenance-free PVC alternative seems to have proved irresistible and widespread, and the practice has provided a cheap fix to the problem of Common Starlings *Sturnus vulgaris* nesting in house roofs. These were generally regarded as noisy, dirty creatures whose chicks kept people awake at night. Not long ago, every house in the estate where I live had a Common Starling, House Sparrow or Common Swift *Apus apus* nest and a small number had House Martin *Delichon urbicum* nests. Now, with virtually the whole estate converted to PVC as a means of securing the roof,

these four species have declined rapidly to extinction, with the exception of a handful of Common Swifts, and two pairs of Common Starlings nesting in a house with old wooden fascia boards. Furthermore, local councils have switched to PVC *en masse* when renovating council house estates. The effects of modern materials and house-types in reducing nesting opportunities for birds in urban areas was highlighted by Wotton *et al.* (2002), and it would be interesting to compare sparrow declines in certain towns with some measure of the extent to which the adoption of PVC boards have sealed off potential nest-sites, perhaps by using data from local councils.

Barn Swallow *Hirundo rustica*, Wren *Troglodytes troglodytes*, Robin *Erithacus rubecula*, Blackbird *Turdus merula* and tits *Parus* have also declined in Retford but none as catastrophically as the House Sparrow and Common Starling. I believe that securing sheds and outbuildings has led to a loss of nesting habitat for the House Sparrow, and has reduced the availability of nest-sites safe from cats. An increase in the awareness of crime and theft from such premises means that most insurance companies are unwilling to insure outbuildings. Householders have thus sealed up broken windows, open doors and gaps in the woodwork.

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Golden Orioles in Britain

It is interesting to note that the findings of the *Report on scarce migrant birds in Britain in 2001* (Fraser & Rogers 2003), that 2001 was one of the worst years on record for Golden Orioles *Oriolus oriolus*, match those of the Golden Oriole Group (GOG). We found that 2001 was the worst year since we began work on Golden Orioles *Oriolus oriolus* breeding in eastern England, in 1985. In fact, 2001 was the worst

year on record since Golden Orioles started to breed in the Fens, in 1967. In 2001, there was only one proven successful breeding record in our study area, while at another site a female partially built a nest before abandoning it. There were a small number of other cases where birds were present at breeding sites for a short period, before dispersing, unpaired. Overall numbers were down, and we believe that this

was entirely due to weather conditions, a factor not mentioned by Fraser & Rogers.

Air temperatures, in East Anglia at least, were well below average for the critical months of March, April and early May, when leaf emergence in poplars *Populus* occurs. This reduced the availability of invertebrate food dramatically for birds arriving back on territory after the long haul from African wintering quarters. In turn, this meant that females were in poor condition at the start of the breeding season. Since most leaves did not appear, even on early leafing varieties of poplar, until about the second week of May, caterpillars and other invertebrate prey were not available in sufficient quantity until well after the time for breeding, and consequently the few birds which returned to breeding sites were forced to disperse widely, often far from traditional sites. Reports of three separate birds in Norfolk in late June, counted by Fraser & Rogers as migrants, might easily have involved such birds wandering from breeding sites.

The fact that 28 of 79 records were from the Isles of Scilly could also be accounted for by weather displacement. Were they bound for the mainland but diverted by the bitterly cold

northerly winds, and associated windchill, which we experienced in eastern England? Having to battle against such conditions, the birds probably turned and headed southeast to France. Our colleague, Pascal Etienne, who monitors orioles in the Somme region, commented that conditions were normal with regard to breeding in this area.

A further question is whether these climatic conditions were responsible for the dearth in numbers of other migrants which typically appear at the same time as Golden Orioles, in particular Wrynecks *Jynx torquilla* and Red-backed Shrikes *Lanius collurio*? Foot-and-mouth-disease restrictions did not hamper GOG's work, and it is doubtful whether they would have affected casual observations, of male Golden Orioles at least, given that much of their arboreal habitat is within earshot of public roads, and it is through their vocalisations that most of them are first discovered. No, we believe they were just not there.

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Migration theories

I very much enjoyed reading the recent paper on vagrancy theories in *BB* (Gilroy & Lees 2003). Much of what the authors say is sensible, but some of it is also well known. These topics have been discussed over and over again, whenever ornithologists with an interest in migration and vagrants meet. It may be semantics, but while the authors admit that the ideas presented are not new, they still claim that 'the theory proposed will provide a basis for further discussions'. Well, is there a new theory or not? The notion that eastern vagrants in western Europe are not all lost to their species or population, but could to some extent form a secondary wintering strategy, is actually an old idea. This could have been better acknowledged by the authors, and properly referenced.

Another point which I feel could have been treated in their paper, and which would explain the speed at which secondary strategies can

develop, is the plausible theory that most passerine migrants are born with an inherited ability to migrate in a certain direction, and to return in spring. If they survive, then they will try to repeat precisely this route when embarking on following migrations, using memory of landmarks, suitable roost sites, feeding areas, and so on. Thus, it is obvious that genetic factors guide the first migrations of the young bird, in particular those of night migrants; but after its first year, the bird also uses acquired abilities to reach its destination, to an unknown, though presumably substantial, degree. This is not greatly different from the ability of young birds to learn their song. Beginning with a basic ability embedded in their genes, they quickly perfect their singing upon hearing the songs of older males of their species; in other words, inherited and acquired abilities are combined.

We should not underestimate the ability of birds to memorise a migration route, even long ones, once they have negotiated their first year successfully. To believe that birds migrate year after year using only genetically coded information would be a major mistake. It could hardly explain, for instance, why a Common Swift *Apus apus* returned to the same Swedish roof

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tile for 11 consecutive years, and to the same village for 17 years.

Reference

Gilroy, J. J., & Lees, A. C. 2003. Vagrancy theories: are autumn vagrants really reverse migrants? *Brit. Birds* 96: 427-438.

'Pseudo-vagrancy' – a new development?

I enjoyed the recent article on vagrancy theories in *BB* (Gilroy & Lees 2003), and found the proposal that certain Siberian vagrants to Britain are performing annual migrations to presently undiscovered wintering grounds in western Europe or West Africa both interesting and plausible. I wonder, however, whether the idea – see, for example, table 2 of that paper – that these 'pseudo-vagrants' are on passage to '*newly colonised* wintering areas' (my italics) fits the historical evidence.

During the nineteenth century, Heinrich Gätke (1895) showed that both Richard's Pipit *Anthus novaeseelandiae* and Yellow-browed Warbler *Phylloscopus inornatus* – the two prime candidates for 'pseudo-vagrancy' according to Gilroy & Lees – occurred regularly on Helgoland, Germany. The pipit was 'regarded by the professional shooter of this island as so common an appearance, that he would not on its account miss the opportunity of shooting a Woodcock [*Scolopax rusticola*]', a point that Gätke illustrated by quoting a number of extracts from his 'ornithological diary' (for example, in September 1848, he noted 'From 17th to end of month, shot over thirty'). Gätke associated Richard's Pipits with periods of 'fine warm weather and a south-easterly wind', but lamented that because of a 'change in weather during the migration periods' it was 'less fre-

quent in its appearance than formerly'. Inspired by the pioneering work on Helgoland, similar ornithological discoveries soon followed in Britain, notably on Fair Isle, 'the British Heligoland' (see Eagle Clarke 1912).

The Pine Bunting *Emberiza leucocephalos* is another species which has a longer history of regular occurrence in western Europe than might be inferred from Gilroy & Lees, who cite Occhiato (2003) in claiming that it has 'recently' been discovered wintering in Italy. Occhiato, however, noted a number of references – the earliest dated 1886 – which indicate that small numbers of this attractive bunting have long been known to occur in that country on both passage and in winter.

If the theory of 'pseudo-vagrancy' proposed by Gilroy & Lees proves to be correct, the historical evidence appears to suggest that it is not a new development.

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Reviews

THE SPECIATION AND BIOGEOGRAPHY OF BIRDS

By Ian Newton.

Academic Press, Elsevier Science, London, 2003.

668 pages; black-and-white illustrations; maps, tables and figures.

ISBN 0-12-517375-X.

Hardback, £49.95.

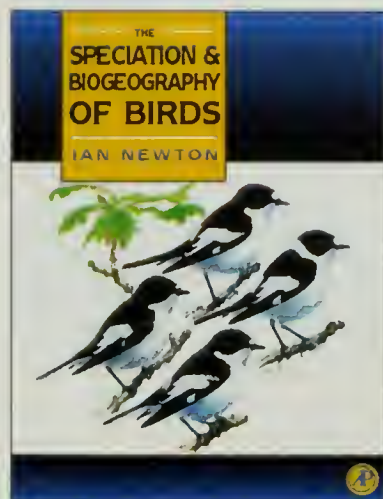
By any standards this book is a tour de force and represents a landmark in bird study. It is simply bursting with interesting information, and yet the approach and coverage are commendably non-trivial. With a page length of 668 – of which 51 are references, 31 the index, and 10 glossary – no-one can complain at a lack of rigour. The work, at least in part, is undeniably written with a professional ornithological readership in mind. Most of us who read *BB* are birders rather than ornithologists, so does the book have much to offer *BB*'s regular readership? The answer is, undoubtedly, yes. It is lucidly written, largely free of jargon, and all you need is what most of us have: a strong curiosity about all things avian.

You may not want to throw it in your rucksack to read in the hide during periods of bird inactivity (although its sole availability in hardback allows for this kind of mistreatment), but, when combined with a log fire and your favourite tipple, a whole series of wonderful winter evenings with this book are in prospect for the purchaser. Yes, even those who cannot easily distinguish dowitchers *Limnodromus* or separate sand plovers *Charadrius* will have hours of pleasure, provided they have some curiosity about bird speciation. The book is pleasingly illustrated with black-and-white sketches by Keith Brockie, in addition to a host of useful maps and informative tables of data.

Ian Newton, who is himself that rare hybrid of keen birder and

top-flight ornithologist, has subdivided this monograph into six sections: evolution and diversity of birds; major distribution patterns; effects of past climate change; limitations of species distribution; bird movements; and, finally, a concluding section. The particular strength and appeal of the book stem from the fact that the author has a global knowledge of birds, and so from the outset the reader is invited to consider complex topics such as the forces that drive speciation, species population spread, or species extinction, on a breathtakingly broad canvas both in historical and geographical terms. The book has also come on the market at an opportune time, when molecular DNA-based methods are informing our understanding of species and speciation in new ways, and sometimes, as with the classification of the Galapagos ground finches *Geospiza*, revealing the errors of past conclusions.

Since I am not a professional ornithologist, there is a host of detail here which I cannot readily evaluate. Nevertheless, as someone who knows something about genetics, as well as being a rather average birder of long standing, I cannot easily fault the book. I was astonished to discover that 9% of all bird species have been found to hybridise, at least on occasion; interested to learn that bird species which do not widely overlap tend to narrow and subdivide their respective choices of habitat and food in those areas where they *do* overlap; and consoled to find that I was not alone in thinking (erroneously, as it turns out) that Australian *Gerygone* warblers were related to Sylviid warblers of Eurasia and Parulid warblers of North America. Other points that are brought to the reader's attention are, for example, the astonishingly close convergent evolution between the Little Auk *Alle alle* of the North Atlantic and the Magellanic Diving Petrel *Pelecanoides magellani* of the Southern Ocean;



the 26 parallel species, such as Willow Tit *Parus montanus* and Black-capped Chickadee *P. atricapillus*, which occur separately in Eurasia and North America but are both related and ecologically closely equivalent; the amazing site fidelity displayed by many species of migratory birds within both their summer breeding areas and wintering ones; and the impressive northerly range expansions (often with equivalent southerly range retractions) which have been a feature of many bird species not just in the recent past when global warming has been on everyone's mind, but also, for many species, during the early part of the twentieth century.

In summary, I have little but great enthusiasm for this book. I suppose that it would have been good to see greater detail about the methodology and potential contribution of DNA technology to avian taxonomy, but that would have made the volume even larger and weightier. As it stands, it represents a major synthesis, analysis, and up-to-date presentation of a fascinating topic. You will easily convince yourself that purchasing this book will be money well spent, and that ownership is essential to anyone who is serious about birds and birdwatching.

Norman Maclean

**NIKO'S NATURE: THE LIFE
OF NIKO TINBERGEN
AND HIS SCIENCE OF
ANIMAL BEHAVIOUR**

By Hans Kruuk.
Oxford University Press,
Oxford, 2003. 391 pages;
numerous photographs
and line-drawings.
ISBN 0-19-851558-8.
Hardback, £20.00.

Biography is not a common genre among bird books; but then bird-watchers do not commonly win Nobel Prizes for their work. Niko Tinbergen was a dedicated naturalist with an insatiable curiosity, and the founding father of the study of animal behaviour, then called ethology. He shared the highest of scientific honours with the more popularly known Konrad Lorenz, who was a lifelong friend, and Karl von Frisch (of dancing honeybee fame).

Tinbergen was not an academic star in his youth. He spent too much time birdwatching in the Dutch dunes for that, but he developed outstanding field skills and an interest in all creatures. He spent a year in Greenland, where he stayed with an Inuit shaman and came back with a strongly utilitarian view of wildlife. Animals were machines

whose behaviour originated as if from a programmed black box and the scientist's challenge was to interpret the code without becoming confused by emotional involvement. Lorenz lived with and studied a menagerie of tame animals. Leading animal psychologists of the day studied zoo animals or laboratory rats and pigeons set artificial tasks in cages and mazes. To Tinbergen, animals were wild creatures that lived in the field and were to be studied by critical observation and simple experiment.

Tinbergen was an excellent communicator. He had a clear and simple style of writing, in marked contrast to that of many of his peers. He believed that if you could not express yourself clearly and simply then you probably did not yourself understand what you were talking about. He was also an enthusiastic populariser, writing articles and books as well as making films – one of which, though now dated, sits in the pantheon of great natural history films.

A hallmark of Tinbergen's work is clear and simple experiment in the field, such as presenting birds with differently sized or coloured eggs. The work was totally without numbers. Sample sizes, not usually stated, could be as low as one with no control or blinding. His older

brother also won a Nobel Prize, ironically for development of econometrics, a new quantitative approach to economics. The two were never close and Niko never saw the importance of quantification. We now know that many of his experiments were unrepeatable and in some cases the conclusions were incorrect. But this does not matter. It was his approach, combining sharp observation in the field and simple experiment to test ideas, which inspired the growth of a new frontier.

Tinbergen was a humble and charming man. He attracted around himself a dynamic group of students and uninhibited intellectual debate at a time when professors were often superior and distant. His group of students grew an astonishing roster of talent. They included Richard Dawkins, John Krebs, Desmond Morris and other big names too numerous to list. Tinbergen's legacy was a seminal contribution to the great flowering of the subject now known as behavioural ecology.

Niko's Nature is an extremely good read. The history of his life and science is fascinating in its own right but the deeper interest is the degree to which many of its insights are timeless.

Colin Bibby

**THE BIRD MAN: THE
EXTRAORDINARY STORY
OF JOHN GOULD**

By Isabella Tree. Ebury Press,
London, 2003.
246 pages; 4 colour and
16 monochrome plates.
ISBN 0-7126-2158-X.
Hardback, £14.99.

This is a first-class read, charting the life and times of an extraordinary man. Not for the first time while reading about a Victorian explorer-naturalist was I struck by the sheer fortitude and downright toughness of the principal character, to say nothing of his poor

wife. These days we have it easy by comparison. From humble beginnings, John Gould rose to a position of unparalleled prominence in Victorian ornithology, his life's work as a producer of great bird books eclipsing his work in the field. Most of us will have at least a fleeting awareness of these groundbreaking and lavishly illustrated works, of which his seven-volume *Birds of Australia* is perhaps the best of all. If you are a book collector, take a deep breath... a complete set of his works could set you back a cool half a million sterling!

It is impossible not to be greatly impressed by Gould's contribution to ornithology – but it is less easy to admire him as a man. He comes across as driven by an obsessive

ambition to be accepted both in society and as a scientist, and as a selfish and ruthless man who rode roughshod over his associates and helpers to achieve his ends. Although he will forever be personally associated with great bird art, he himself was a poor draughtsman: his hugely skilled but largely unsung contributing artists are the real heroes of his greatest works, not least his long-suffering wife Elizabeth and the much put-upon Edward Lear. Nevertheless, Gould's story is a big chapter in the whole history of men and birds and is worthy of your attention.

Mike Everett

**WHOSE BIRD? MEN AND
WOMEN COMMEMORATED
IN THE COMMON
NAMES OF BIRDS**

By Bo Beolens and Michael
Watkins. Christopher Helm,
A&C Black, London, 2003.
400 pages; numerous
small portraits.
ISBN 0-7136-6647-1.
Paperback, £17.99.

When I saw Klaas's Cuckoo *Chrysococcyx klaas* and Levaillant's Cuckoo *Clamator levaillantii* within a few miles of one another in Sierra Leone, I knew nothing of the connection between them. It turns out that Klaas was the Hot-tentot servant of the explorer, traveller and naturalist Francois Le Vaillant, and was evidently the finder of the bird which bears his name. Nothing more is known of him.

I made this discovery while browsing through this excellent

little book. I then went on to read about Le Vaillant (the authors seem to be in some doubt as to the correct spelling of his surname), who collected in Cape Province in what is now South Africa (and gave his name to half a dozen birds) and wrote the classic *Histoire Naturelle des Oiseaux d'Afrique*. That entry led me on to the great French artist Jacques Barraband, who illustrated the work (and who had also been commissioned as a wildlife artist by none other than Napoleon Bonaparte), and then to the celebrated Dutch ornithologist Coenraad Jacob Temminck, of stint *Calidris* and courser *Cursorius* fame, who categorised and studied Le Vaillant's African specimens.

Looking at this book is like that. You find you cannot put it down, and that one reference leads to another, and another, and so on. A five-minute browse can so easily lead to a fascinating hour meeting a remarkably diverse assemblage of men and women and gleaning all sorts of information. The idea of a

book telling us all about those for whom birds are named is not new, of course, and most of us will at once look for comparisons with the well-known works of Barbara and Richard Mearns (*Biographies for Birdwatchers* and *The Bird Collectors*), and ask the question 'Is this new volume really necessary?'

I think the answer is yes, because the authors have cast their net worldwide and have succeeded in dealing with 1,124 individuals and their associated 2,235 bird species within a single book. If I have one criticism, it is that the biographies vary so hugely in length and detail, sometimes being inexplicably and even frustratingly brief, which makes me long for the more substantial essays of the Mearns team. But that is a small point. All in all, I have to congratulate Bo and Michael on a job well done. My copy of *Whose Bird* is going to be very well thumbed...

Mike Everett

**WHERE TO WATCH
BIRDS IN KENT,
SURREY AND SUSSEX**

By Don Taylor, Jeffery
Wheatley and Paul James.
4th edition. Christopher Helm,
A&C Black, London, 2003.
320 pages; line-drawings and
maps. ISBN 0-7136-6420-7.
Paperback, £14.99.

One might think that the densely populated counties of southeast England had few worthwhile places to watch birds. This book, first published in 1987, dispels any such notion. It has detailed accounts of 12 main sites in Kent, 14 in Surrey and 17 in Sussex as well as brief notes on a further 40 locations. The main sites include all those one would expect (e.g. Dungeness, Pagham Harbour, the Isle of Sheppey, Staines Reservoir and Stodmarsh), as well as new developments and recent 'discoveries' (e.g. The Wetland Centre at Barnes,

Bockhill Farm). Accounts vary from three to 16 pages per site and have sections on habitat, species, timing, access (including by public transport and for those with disabilities), a calendar and at least one map. The maps are a big improvement on those of previous editions and although many remain small-scale they all refer to the relevant, more detailed, Ordnance Survey Explorer (1:25,000) sheet.

A systematic list has notes on each species' current status with some site references, although those for Lesser Spotted Woodpecker *Deudrocopos minor* have gone awry. The area's most recent additions (Pallid Harrier *Circus macrourus* and Lesser Sand Plover *Charadrius mongolus*) are included, as are several distinctive races. Aimed at, and appropriate for, birdwatchers at any level, the glossary unnecessarily spells out what RSPB and EU stand for: all readers should belong to the former even if

some might prefer not to be a part of the latter! There are no author biographies, although the authors will be well known to many in their respective counties. Paul James, editor of the latest Sussex county avifauna and bird reports, was the ideal choice to take over from David Burges and has done so seamlessly. The other authors have been involved from the outset.

Few typos (including an amusing East Grimstead on page 187), the high standard of production and attractive line-drawings make this a nice book to browse and it is also highly readable and packed full of up-to-date information. Residents or regular visitors will find it a useful, and reasonably priced, acquisition that may spend more time in a glove-compartment or rucksack than on a bookshelf. Those owning an earlier edition should seriously consider an upgrade.

Richard Fairbank

News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

Damming verdict for Saemangeum

As activists on three continents prepared to mark World Wetlands Day (2nd February) with peaceful protests against the obliteration of northeast Asia's premier shorebird site, the devastating news came through that the reclamation of the Saemangeum estuary in South Korea was to resume (see *Brit. Birds* 96: 463, 531 & 613). Court action by environmentalists had halted the building of a 33-km seawall which would turn 400 km² of mudflat into farmland, but an appeal by the

Ministry of Agriculture and Forestry was upheld. Undeterred, British birders conducted a *samboilbae* beside The Wash at Snettisham in Norfolk to draw media attention to another area of mud on the other side of the world. This is a respectful Buddhist sign of defiance – three steps then a kowtow – which religious leaders in Korea had used to highlight Saemangeum's plight: in 2003, four of them led a *samboilbae* from Saemangeum to the capital city, Seoul,

taking 65 days to complete the 330-km journey. Three of those spiritual leaders were in the UK for World Wetlands Day and they presented a petition signed by over 12,000 people from 89 countries to the South Korean Ambassador in London. The online petition was co-ordinated by Wetlands and Birds Korea and they have vowed to fight on by appealing to a higher court.

Link: Wetlands and Birds Korea
www.wbkenglish.com

Avian flu outbreak blamed on wild birds

The bird flu epidemic, which had affected ten Asian countries by early February, appears to have been spread by the extensive cross-border trade in poultry from industrial-scale rearing units, but the authorities in several countries – and the poultry industry itself – have been keen to find scapegoats in the wild bird population. The World Health Organisation has done its bit: the WHO fact sheet on avian influenza refers to migratory waterfowl, most notably wild ducks, as the natural reservoir of flu viruses. Nineteen people in Vietnam and Thailand have died after close contact with domestic poultry – not wild birds. In Hong Kong, however, the world-renowned Mai Po marshes have been closed to prevent people being exposed to migrant waterfowl, and in Taiwan, the Council of Agriculture's statement that migratory birds could carry the virus has curtailed many birdwatching activities and even school trips to see penguins at the zoo.

Wild birds can be infected by avian flu – indeed, a Peregrine Falcon *Falco peregrinus* found dead in Hong Kong was reported to have tested positive for the virulent strain H5N1 – but the outbreak appeared to radiate out from China, and not to follow the south–north direction which would have been expected if it had been spread by spring migrants. Furthermore, the outbreak occurred well in advance of the spring migration season, while the spread of the disease is consistent with increased production/export of poultry from China in the run-up to the festivities of the Chinese New Year. One prudent move by the Chinese authorities has been the relocation of half the remaining population of the critically Endangered Crested Ibis *Nipponia nippon* to the remote Qinling Mountains in northwestern Shaanxi province after the H5N1 virus was found in poultry at Xian, 100 km from the protected colony of ibises in Zhouzhi county. Around 250 birds from a world population of 500 have been moved.

Link: WHO Avian Influenza fact sheet
www.who.int/csr/don/2004_01_15/en/

Entire Lesser White-front population logged in Greece

A survey of the Evros Delta, in northeast Greece, in January 2004 found no fewer than 52 Lesser White-fronted Geese *Anser erythropus* in the saltmarsh surrounding the Drana Lagoon. This flock, of adults and immatures, was associated with 3,500 White-fronted Geese *A. albifrons* and 150 Red-breasted Geese *Branta ruficollis* and comprises the entire European breeding population of the species (excluding those from the reintroduction scheme).

Lesser White-fronted Geese are globally Endangered. The European breeding population was estimated at around 50 birds during surveys conducted last autumn on the shores of the Varangerfjord in northern Norway. In 1995, a study using satellite transmitters concluded that part of the Fennoscandian population wintered in the Evros Delta. This has now been confirmed by the observations in January, and the fact that one of the geese had been colour-ringed in Norway, in May 2002. It may be safely assumed that the survival of the Lesser White-front's European breeding population is highly dependent on the wintering conditions in the Evros Delta, so the EU-sponsored study of the feeding ecology of the geese and consequent management of the saltmarsh grazing is timely; but the resumption of hunting permits for White-fronted Geese in the delta is clearly a retrograde step.
(Contributed by Didier Vangeluwe)

Sandeel fishing ban extended

The UK's seabirds have been boosted by a decision to extend the ban on sandeel (*Ammodytidae*) fishing off the east coast of Scotland and northeast England for another 12 months. EU Ministers have agreed to the closure, which stretches from Northeast Scotland to Northumberland. It includes the sandeel fishing grounds of the Wee Bankie, off the Firth of Forth, and part of the Farne Deep, off Northumberland. The ban was first introduced in 2000 to safeguard internationally important populations of Puffins *Fratercula arctica* and Kittiwakes *Rissa tridactyla* on the east coast, which depend heavily on sandeels for food during the breeding season. There may well be benefits for commercial fish species, such as cod and mackerel, as well, since they also depend on sandeels for food.

During 2003, it became clear that sandeel stocks in the wider North Sea were seriously depleted. The Danish fleet, which dominates the North Sea sandeel fishery, had a catch limit of nearly one million tonnes last year but could catch only 300,000 tonnes. This should have rung alarm bells, but EU Ministers went against scientific advice and agreed a meaningless catch limit for 2004 of 826,000 tonnes, i.e. almost three times the total amount caught last year.

Welcoming the continued closure, Euan Dunn, senior marine policy officer at the RSPB, said: 'We applaud the Government's efforts in securing the ban on sandeel fishing off our coast. However, the total lack of precaution towards catch limits for industrial fisheries in the wider North Sea is not good news for the seabirds or commercial fish, whose diet is crucially dependent on sandeels.'

Link: Fisheries Research Services: Sandeels

www.frs-scotland.gov.uk/FRS.Web/Delivery/display_standalone.aspx?contentid=657

EU expansion threatens farmland birds

With the EU set to expand from 15 nations to 25 on 1st May, BirdLife has made an urgent plea to the European Commission and all 25 states to put wildlife at the heart of farming policy. A new BirdLife study on the population trends of wild birds shows that numbers of 24 widespread farmland birds (including Northern Lapwing *Vanellus vanellus* and Sky Lark *Alauda arvensis*) have crashed across Europe by more than 30% since 1980 – a result of intensive farming. Declines have been most severe in countries in northwest Europe, which have the most intensive farming systems. Birds at most immediate risk are those particularly vulnerable to intensive agriculture, for example Corn Crake *Crex crex* and Great Bustard *Otis tarda*, and such species have already been lost as regular breeders from much of northwest Europe. Currently, eastern European states still have significant populations of these birds, but these too will be threatened as agricultural development spreads. BirdLife is urging EU and Future Member States to use the Common Agricultural Policy funds – the taxpayer's money – to maintain extensive farming systems which encourage environmentally sensitive practices and benefit rural communities.

Rubythroat avoids the Maltese guns

One of the ten accession countries to the EU is Malta, which has controversially won a derogation from the Birds Directive so its hunters can continue spring hunting of Common Quail *Coturnix coturnix* and Turtle Dove *Streptopelia turtur*. Not that Maltese hunters have any great respect of hunting seasons or protected species. The latest outrage occurred in January 2004 when two Eurasian Spoonbills *Platalea leucorodia* were killed and removed from the Ghadira nature reserve overnight: 'the two birds had slept at the reserve. We last saw them there at dusk. In the morning what we found were bloodstained feathers' said BirdLife Malta president Joseph Mangion.

One bird which did evade the hunters was Malta's first Siberian Rubythroat *Luscinia calliope*, trapped and ringed at Rabat on 25th January. White's Thrush *Zoothera dauma* was also added to the Maltese list recently, but in depressingly familiar circumstances: one was shot at Bahar ic-Caghaq on 10th October 2003 and another two were reportedly taken in the first week of November from Mizieb.

Catalonian site saved

There is good news from Spain, where the last breeding site of Dupont's Lark *Chersophilus duponti* in Catalonia has been saved. Timoneda d'Alfés, near Lleida, home to almost 20 pairs of Dupont's Larks, as well as a variety of other important species (see *Brit. Birds* 96: 264), was threatened by the planned expansion of a rural airstrip into a regional airport. Happily, a change of government in Catalonia means the airport plans will now be shelved, at least for four years until the next elections.

Pioneers

Alan Knox has written in to point out that the Northumbrian Atlas, reviewed in *BB* recently (*Brit. Birds* 96: 658-659), was *not* the first wintering atlas for a British county, since the North-East Scotland Bird Club produced a pioneering *year-round* atlas, showing both breeding and wintering distributions (as well as covering migration times), 14 years ago. *The Birds of North-East Scotland*, by S. T. Buckland, M. V. Bell & N. Picozzi, was published in 1990.

Record New Year's Day

A team of four birders from Kent and Sussex set a new record total for species recorded on New Year's Day in Britain. Marcus Lawson, Andrew Lawson, Gary Howard and Nigel Driver saw or heard 135 species in the two counties (five of these were seen in Sussex only), starting at 07.00 hrs with a Tawny Owl *Strix aluco* and finishing with a White Stork *Ciconia ciconia* roosting on its favoured pole at 19.00 hrs.

Highlights on the day included three species of diver *Gavia* and four grebes (no Slavonian *Podiceps auritus*), Jack Snipe *Lymnocyptes minimus*, Shore Lark *Eremophila alpestris*, Yellow-browed Warbler *Phylloscopus inornatus*, Hawfinch *Coccothraustes coccothraustes* and Snow Bunting *Plectrophenax nivalis*. In addition, a distant flock of grazing geese, spied from the ancient highway between Deal and Sandwich, proved to be mainly Pink-footed *Anser brachyrhynchos* with a handful of White-fronted *A. albifrons*, the biggest flock of Pink-feet in Kent since 1940! Although the weather was better than that the previous year, when the team recorded 127 species, conditions were still pretty miserable, and the team have designs on breaking the 140 barrier at some point when the weather is kinder. They wish to thank those who helped with information both before and on the day.

Red-letter day in Greenland

A new Bird Protection Law for Greenland came into force on 15th January, the first serious attempt for many years to ensure an ecologically sustainable wildlife harvest in the country. The legislation is a critically important step and will be monitored closely by WWF Denmark. Conservationists in Denmark and across Europe had grown increasingly alarmed by the unsustainable hunting of seabirds like Brünnich's Guillemot *Uria lomvia* in Greenland. Of course, the new law is just a first step, and much hard work remains to be done as the Home Rule authority, wildlife inspectors and police start the sensitive and lengthy process of education and enforcement. And the Home Rule authority cannot rest on its laurels – there are 11 Important Bird Areas designated in Greenland, but their protection requires implementation of the Ramsar Convention on the island.

Vet drug killing vultures

Further to the story reported by N&c in July 2003 (*Brit. Birds* 96: 349), the veterinary drug diclofenac has now been categorically linked with the dramatic decline of *Gyps* vultures in the Indian subcontinent: the birds have been poisoned by feeding on carcasses of cattle treated with the anti-inflammatory drug. Dr Lindsay Oaks, who led the research, published recently in *Nature*, said: 'This discovery is significant in that it is the first known case of a pharmaceutical causing major ecological damage over a huge geographic area and threatening three species with extinction.' Indian White-backed Vulture *Gyps bengalensis*, Slender-billed Vulture *G. tenuirostris* and Indian Vulture *G. indicus* are all now classed as Endangered.

Links: Peregrine Fund (www.peregrinefund.org/press/Vulture_diclofenac.html); Vulture Rescue (www.vulturerescue.org).

Raptorwatch at Messina

Volunteers to help survey and protect migrating raptors and storks at the Strait of Messina, southern Italy, between 1st April and 28th May, are being sought again this year. For more information, contact Andrea Corso, Via Camastra 10, 96100 Siracusa, Italy or via e-mail at: voloerrante@yahoo.it

Don't be shy – have a flutter

On the other side of the world, a bird race with a difference sees the unlikely collaboration of a conservation group and a betting company, and the prospect of bets placed on migrating albatrosses! It is hoped that *The Big Bird Race* will highlight the threat of longline fishing in the Southern Oceans and raise funds for albatross conservation. Scientists from the Tasmanian State Government will electronically tag 18 juvenile Tasmanian Shy Albatrosses *Thalassarche cantata* and follow their migration from three islands off Tasmania (Pedra Branca, Albatross Island and Mewstone) to South Africa. Ladbrokes.com will be offering a variety of bets on the 'race' among the birds to the finish line, with punters able to follow their progress online via satellite.

The project was devised by the Conservation Foundation, a non-profit organisation which provides a means for the public and private sectors to collaborate on environmental projects. The race will begin in the week starting March 29th (the same week as the Grand National here in the UK), when the first birds are expected to start their 9,600-km journey. They are likely to reach South Africa between five and six months after 'the off', so the race will be a marathon rather than a sprint. Any income generated from the bets will be fed directly back into seabird conservation projects determined by a committee of experts, including representatives from BirdLife.

Link: Conservation Foundation (www.conservationfoundation.co.uk).

BOU conference

A reminder that the BOU's spring conference *Lowland Farmland Birds II: the road to recovery* takes place at Leicester University on 26th-28th March. Topics range from lowland breeding waders to Tree Sparrows *Passer montanus*. See www.bou.org.uk for details.

Announcements

Bird Photograph of the Year 2004

Established in 1976, this competition seeks to recognise the best and/or the most scientifically interesting bird photograph. Up to three colour photographs, each taken during 2003, may be submitted by each photographer. Preference is given to photos taken in the Western Palearctic (Europe, North Africa and the Middle East), but those of species on the West Palearctic List taken anywhere in the world are also eligible. The winner will receive a Sprayway Gore-Tex jacket, an inscribed salver and £100; the two runners-up will receive £50 and £25; all three winners will also receive books presented by HarperCollins Publishers and A&C Black. An additional award of an engraved goblet and £100 is presented by The Eric Hosking Trust for the highest-placed photograph submitted by an entrant aged 25 or under.

Traditionally, we have accepted transparencies only; but this year we will accept digital images as well as those in traditional format. For full details of the rules (essential for those who wish to submit digital photos), visit our website (www.britishbirds.co.uk), or write to *British Birds* (BPY), The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, enclosing a stamped, self-addressed envelope.

The closing date for entries this year is 30th April.



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Artwork on the cover of BB

This month's fabulous cover painting by Alan Harris is a reminder that *BB* will, occasionally, feature artwork on the cover of the magazine. With the Bird Illustrator of the Year competition now discontinued, at least for the time being, we wish to take this opportunity to remind artists that we will be pleased to consider artwork for the front cover and will pay for any used. The guidelines for submission are deliberately vague to allow artists the greatest freedom of expression: all we ask is that your work depicts one or more Western Palearctic species, and that the medium used will reproduce well at the actual size of the cover – approximately 17 x 25 cm. Original artwork only will be considered, which will be returned after use; and we will judge each submission purely on its own merits. Please contact the Editorial Office (see inside front cover) if you wish to submit your work.

Eds

Photographs and drawings for sale

Many of the photographers and artists whose work appears in *BB* appreciate the opportunity to sell their work. Anyone who wishes to obtain photographic prints or original artwork is welcome to enquire about their availability.

Write to the photographer or artist concerned, c/o *British Birds*, The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY.

www.sprayway.com

www.acblack.com

www.harpercollins.com

Correction

Report on rare birds in Great Britain in 2002

BBRC regrets that the following comment did not accompany the Isabelline Wheatear *Oenanthe isabellina* account (*Brit. Birds* 96: 589) rather than that which was printed:

'BBRC has recently undertaken a detailed review of a record from Blakeney Point, Norfolk, in October 2000 (*Brit. Birds* 94: 486). This followed the receipt of

descriptions and queries about its identification from the four other observers who saw the bird and who were either undecided or considered it to be a Northern Wheatear *O. oenanthe*. Upon review, it was concluded that the identification, based upon the initial description, was correct and it was again accepted by BBRC.'



Monthly Marathon

Photo no. 203:
Common Kestrel

Photo no. 203 (plate 77) shows three falcons gathered at the entrance to what is obviously a nest-site. Most birders will immediately recognise these birds as kestrels and, with just two species breeding within the Western Palearctic, the choice lies between Common Kestrel *Falco tinnunculus* and Lesser Kestrel *F. naumanni*. The slightly 'fluffy' appearance and, especially, the heavy and diffuse streaking on the breast point to them being youngsters and, of course, the nest-site is also a bit of a giveaway. Although Peregrine Falcons *F. peregrinus* might occupy such a nest-site, juveniles of that species would invariably show even heavier and more extensive streaking on the breast, as well as a much darker cap and a broad moustachial stripe.

Separating Lesser and Common Kestrels in anything other than adult male plumage can pose some difficult identification problems, with juveniles and females being especially hard to separate. In recent years, however,

we have come a long way in our understanding of the characters which distinguish these two species, and, as we are presented with such an excellent view here, arriving at a conclusion should, hopefully, be fairly straightforward.

Despite this unobstructed view, with the birds facing us and showing well, several key features which could assist us remain hidden. If visible, the colour and pattern of the underwing would be diagnostic, since in Common Kestrels the basal area of the primaries and secondaries is barred, and shows little or no contrast with the underwing-coverts, whereas juvenile Lesser Kestrels show pale and largely unbarred bases to the primaries and secondaries which show more obvious contrast with the darker wing-tips and spotted underwing-coverts. The relative length of the primaries and tail is also a useful feature, but on unfledged birds these feathers are still growing so, even if visible, would be of no use in separating the two species. Turning now to what we can see, it is clear that all three birds show a thin, but pronounced, dark moustachial stripe



Volker Konrad

77. Common Kestrels *Falco tinnunculus*, Holzminden, Germany, July 1981.

and a narrow dark line running back from the eye: both features associated with Common Kestrel. One further characteristic that clinches the deal, and which shows well here, standing out against the whitewashed wall, is the black claws. In Common Kestrel, the claws are always black, while in Lesser Kestrel, birds of all ages show pale claws, typically varying between white and pale grey.

Steve Rooke

These young Common Kestrels were photographed at Holzminden, Germany, in July 1981, by Volker Konrad. As described last month, this is the fourth round of a new Marathon – and one in which every single entrant correctly identified the mystery bird!

Eds



78. 'Monthly Marathon'. Photo no. 206. Fourth stage in thirteenth 'Marathon'. Identify the species. Read the rules (see page 54), then send in your answer on a postcard to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, or by e-mail to editor@britishbirds.co.uk, to arrive by 30th April 2004.

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Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers mid January to mid February 2004.

Lesser Scaup *Aythya affinis* Exminster Marshes (Devon), long-stayer to 15th February; Studland (Dorset), long-stayer to 15th February at least; Castle Loch (Dumfries & Galloway), long-stayer to 28th January. **King Eider** *Somateria spectabilis* Lax Firth (Shetland), 20th January to 14th February at least; Loch Ryan (Dumfries & Galloway), long-stayer to 14th February at least; Methel Power Station (Fife), long-stayer to 14th February at least; Bluemull Sound (Shetland), long-staying female 22nd January to 14th February at least, with male there on 5th February. **White-billed Diver** *Gavia adamsii* South Nesting (Shetland), 9th-15th February at least.

Cattle Egret *Bubulcus ibis* La Ramée (Guernsey), second island record, 7th February. **Glossy Ibis** *Plegadis falcinellus* Bowling Green Marsh (Devon), long-stayer to 9th February at least.

American Coot *Fulica americana* South Uist (Western Isles), 25th January to 14th February at least; Loch of Clickimin (Shetland), long-stayer to 14th February at least. **Lesser Yellowlegs** *Tringa flavipes* Hayle Estuary (Cornwall), long-stayer to 15th February at least. **Bonaparte's Gull** *Larus philadelphia* Falmouth (Cornwall), presumed long-stayer, 24th January.

Snowy Owl *Bubo scandiacus* North Uist (Western Isles), 9th-15th February, and possibly since mid January. **Red-rumped Swallow** *Hirundo daurica* Church Cove, 9th February; same Covecrack (both Cornwall) 10th-11th February. **House Martin** *Delichon urbicum* An exceptionally early influx was recorded this year, with the first on the Isle of Wight on 2nd February, then up to 40 in southern coastal counties of England by 10th February, including five on Scilly on 8th February (together with a Barn Swallow *H. rustica*).

Richard's Pipit *Anthus novaeseelandiae* Lansallos (Cornwall), 18th January; Welwick (East Yorkshire), 22nd January; Llanilid (Glamorgan), long-stayer to 15th February. **American Robin** *Turdus migratorius* Godrevy (Cornwall), long-stayer to 1st February at least; Grimsby (Lincolnshire), long-stayer to 15th February at least.

Hume's Warbler *Phylloscopus humei* Caernarvon (Gwynedd), long-stayer to 17th January; Fairlop (London), long-stayer to 15th February. **Dusky Warbler** *Phylloscopus fuscatus* Polgigga (Cornwall), 17th-18th January; Clennon Valley (Devon), long-stayer to 15th February at least; Taunton (Somerset), long-stayer to 28th January.

Little Bunting *Emberiza pusilla* Newborough Warren (Anglesey), 21st January to 15th February at least. **Baltimore Oriole** *Icterus galbula* Oxford (Oxfordshire), long-stayer to 16th January.

Note: Plates 79 & 82 below are repeated from last month's issue, when they were unfortunately reproduced from low-resolution scans. We have included them again this month so that readers may enjoy them at their best, and apologise to the photographers for the poor reproduction last time.



Bill Baston

79. American Robin *Turdus migratorius*, Grimsby, Lincolnshire, January 2004.

Recent reports

Robin Chittenden



Left: 80. Long-tailed Tit *Aegithalos caudatus* of the northern race *caudatus*, Westleton Heath, Suffolk, January 2004. Two parties of these stunning white-headed birds turned up in late January, and remained into mid February: one of up to six individuals in Suffolk, and one of four at Lewes, East Sussex.

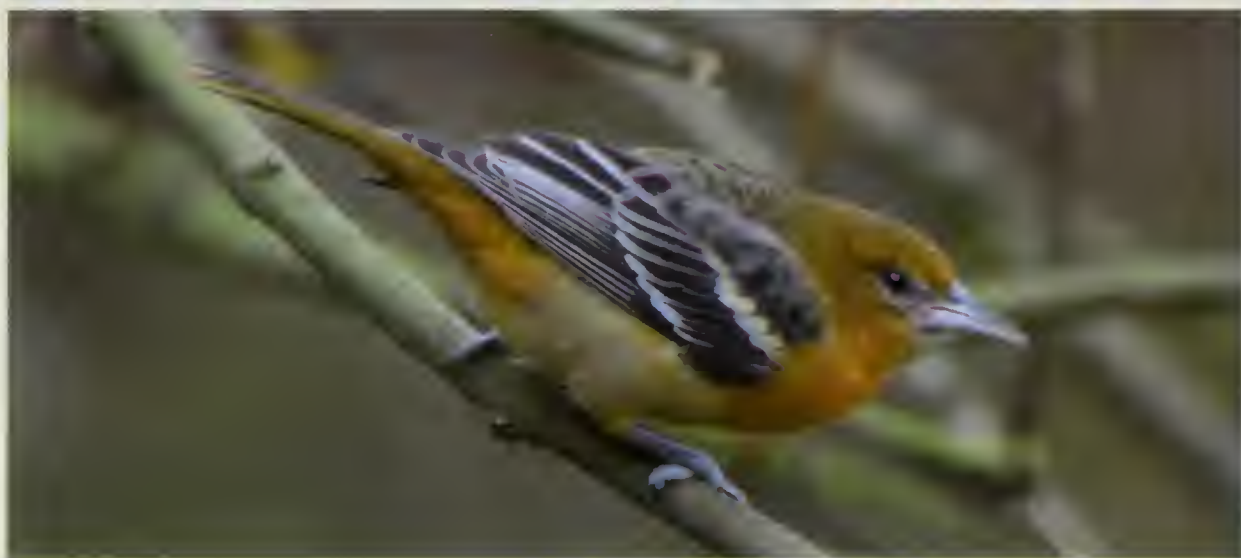
Centre: 81. Snow Buntings *Plectrophenax nivalis*, part of a flock of over 325 birds, Donna Nook, Lincolnshire, January 2004.

Bottom: 82. Baltimore Oriole *Icterus galbula*, Headington, Oxford, December 2003.

Simon Stirrup



Robin Chittenden



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Front-cover photograph: Juvenile Lesser Spotted Eagle *Aquila pomarina*, northern Israel, October 2002.

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Soaring-bird migration over northern Israel in autumn

Dan Alon, Barak Granit, Judy Shamoun-Baranes, Yossi Leshem, Guy M. Kirwan and Hadoram Shirihi



83. Lesser Spotted Eagles *Aquila pomarina*, migrating over northern Israel, October 2002. This photograph shows part of a flock-stream containing nearly 2,000 Lesser Spotted Eagles. Hadoram Shirihi

ABSTRACT Israel is renowned for the large numbers of pelicans, storks and raptors which migrate through the country en route to and from African wintering areas. From 1990 to 1999, the autumn migration of soaring birds was intensively studied during the Northern Valleys Survey, one of the few comprehensive, long-term, ground-observation surveys in the Western Palearctic. The principal species, including White Stork *Ciconia ciconia*, Honey-buzzard *Pernis apivorus*, Levant Sparrowhawk *Accipiter brevipes* and Lesser Spotted Eagle *Aquila pomarina*, tend to concentrate in large numbers on a relatively narrow front, making them comparatively easy to monitor. This paper, which complements an earlier paper describing raptor migration at Eilat (Shirihi & Christie 1992), summarises the results of the survey between 1990 and 1999. For some species, especially those difficult to census on their breeding grounds, long-term monitoring along migration routes provides critical information on world population trends.

Huge numbers of raptors which breed in the northern latitudes of Eurasia migrate to winter in warmer climates, mainly south of 30°N. Many of these migrate diurnally in flocks, covering large distances (up to 20,000 km) in relatively short periods, much of the journey being completed under daily near-fasting conditions. To conserve energy, raptors are forced to adopt passive flight – soaring and gliding – and to exploit the thermals which develop over land. As a result, they are reluctant to cross extensive bodies of open water over which passive flight is difficult. Consequently, large concentrations, or ‘bottlenecks’, of raptors form at strategic points, over straits and through narrow corridors.

One such bottleneck, the Levant (Israel and Egypt in particular), is well known for the vast numbers of migrant soaring birds which move between their breeding grounds in eastern Europe and western/central Asia, and wintering grounds in Africa. In the Middle East, most migratory soaring birds utilise one of two major routes in autumn. The ‘Caspian/Arabian route’ is used mainly by raptors breeding in western/central Asia and crossing into Africa at the southern end of the Red Sea, while the more westerly route, which is the focus of this paper, is used chiefly by raptors breeding in eastern Europe and western Asia. These birds pass east or west of the Black Sea, then cross Jordan and Israel to reach Sinai, and finally reach Africa at the northern end of the Red Sea. Within Israel, two major flyways are recognised: the western route passes over the central mountains and the eastern parts of the coastal plain, while the eastern route passes over the Jordan Rift Valley. In autumn, birds using both these flyways divert west over the northern/central Negev and south from there across the Sinai Peninsula. In contrast to the spring passage, routes across the southern Negev and Eilat are comparatively little used, and there are significant numbers of one species only, Steppe Eagle *Aquila nipalensis*.

In spring, the six most abundant Palearctic raptors to migrate through the Middle East (Honey-buzzard *Pernis apivorus*, Black Kite *Milvus migrans*, Levant Sparrowhawk *Accipiter brevipes*, Common Buzzard *Buteo buteo* of the race *vulpinus*, hereafter referred to as ‘Steppe Buzzard’, Lesser Spotted Eagle *Aquila pomarina* and Steppe Eagle) concentrate through the Levant via Egypt/Sinai and Israel/Jordan. In autumn, however, Black Kites, Steppe Buzzards

and Steppe Eagles occur in relatively small numbers only, preferring the more easterly Caspian/Arabian route (above). Furthermore, the substantial autumn passage of Steppe Eagles at Eilat appears to have declined markedly in recent years, following the virtual disappearance of westernmost breeding populations (Hagemeijer & Blair 1997). Nonetheless, Honey-buzzards, Levant Sparrowhawks and Lesser Spotted Eagles, together with White Pelicans *Pelecanus onocrotalus* and White Storks *Ciconia ciconia*, migrate through the Levant in similarly large numbers during both seasons. These key species tend to concentrate in large numbers on a relatively narrow front, rather than the scattered, broad-front migration employed by many smaller species. For further details of each species, in both spring and autumn, see Shirihai *et al.* 2000.

Since 1982, ground-based observers have carried out systematic surveys of the autumn migration of soaring birds over Israel: Dovrat (1991), Tsovel & Alon (1991), Alon *et al.* (1992), Shirihai & Christie (1992), Leshem & Yom-Tov (1996a, 1998), Shirihai (1996) and Shirihai *et al.* (2000) are perhaps the most important summaries published to date. The position of the Jezreal and Beit Shean Valleys, in the north of Israel, provides a unique opportunity to conduct long-term monitoring of migrating populations of soaring birds, and the ‘Northern Valleys Survey’ is one of the few long-term ground-observation surveys in the Western Palearctic.

Methods

Study site

Between 1977 and 1987, the autumn soaring-bird survey was conducted over central Israel at Kfar Qassem (Dovrat 1991). In 1988, this survey was relocated to the Jezreal Valley and Beit Shean Valley, and renamed the ‘Northern Valleys Survey’. These two northern valleys encompass both the western and the eastern flyways, as defined above (Leshem & Yom-Tov 1998). Both surveys were operated under the aegis of the Israel Ornithological Centre, with DA acting as organiser between 1988 and 1994, and BG from 1995 onwards.

Timing and site location

The westernmost station in the northern valleys is 12 km inland from the Mediterranean Sea coast, while the easternmost station is 61 km



Fig. 1. Map to show station positions of Northern Valleys Survey (closed triangles) and Kfar Qassem Survey (open triangles); adapted from Leshem & Yom-Tov 1998.

from the coast, in the Jordan Rift Valley. The stations are positioned in a more or less straight line from northwest to southeast across the migration corridor (fig. 1), and spaced at regular intervals, which permits the identification of most raptors passing through. For minimal coverage of a 35-km wide corridor, at least 12 stations, each 3 km apart, are operated. Even this level of coverage is, however, not always possible, and thus annual fluctuations should be treated with some degree of caution. All stations are numbered, and measured, according to their distance from the Mediterranean coast.

Each year, the Northern Valleys Survey commenced on 10th August, to coincide with the beginning of White Stork migration, with three or four stations operating between the Jordanian border and 54 km inland. As the season progressed and species composition changed, monitoring began at more westerly stations. From about 25th August, Honey-buzzards began passing through on a broader front, whereupon the survey was extended to within 17 km of the coast, and 13–14 stations were operated if possible. During Lesser Spotted Eagle migration, typically from 21st September to 15th October, counting stations were manned in a band extending from 11 to 46 km from the coast.

Counting effort

Stations were manned from approximately one hour after sunrise, to coincide with the departure of raptors from overnight roosts, until one hour before sunset. Each station was manned by a single observer, equipped with binoculars, telescope and a short-range radio. All observers were experienced and trained in the identification and counting of soaring birds, so that data from each station were directly comparable. Each day, observers were required to complete an observation form, detailing the species observed, numbers, times, approximate distance from station, and estimated altitude and direction of migration. By comparing daily observations, and using radios to communicate with adjacent observers during periods of active migration, it was possible to eliminate double-counting.

Summary calculations

For each species, the mean peak date was derived by comparing the mean total count for each calendar date across the ten years of the survey. As a guide to the length and timing of the key migratory window for each species, we calculated the period during which 90% of the total annual count occurred, subtracting the first and last 5% of the migrants logged (thus excluding atypically early or late birds). Standard linear regression analyses were used to determine trends, which are described only when significant at the $P < 0.05$ level.

To map the spatial distribution of migrating

White Storks, Honey-buzzards, Levant Sparrowhawks and Lesser Spotted Eagles across the line of survey stations, the annual sum of birds that passed over each station was calculated for each two-hour period, from 07.00 hrs to 17.00 hrs. The average sum for each station and two-hour period was calculated for the period 1990-1995. Data were then mapped in a Geographic Information System using ArcView.

Results

During the survey, 35 species of raptors were observed, with a mean annual total of 450,995 individuals. Furthermore, mean annual counts of White Pelican, White Stork and Black Stork *C. nigra* together numbered 300,618 individuals. These totals include the majority of the Palearctic breeding populations of three species, White Pelican, Levant Sparrowhawk and Lesser Spotted Eagle. Table 1 provides the seasonal totals of all soaring-bird species during the 1990-1999 survey, which reveals that the four most abundant species were, in descending order, Honey-buzzard, White Stork, Lesser Spotted Eagle and Levant Sparrowhawk. Each of these four species has a characteristic migration pattern, both in timing and direction, which is described in the species accounts (below) and figs. 2-4.

For several species, there are large annual variations in total counts. There may be several explanations for these fluctuations, depending on the species:

- (i) *Shift in migratory axis* In some years, part of the migratory axis passed to the east of the survey area, i.e. within Jordanian territory, and in such years numbers counted were low.
- (ii) *Altitude of migration* The altitude at which birds pass over the count stations may vary according to weather (e.g. see Shamoun-Baranes *et al.* 2003), and this will affect counts, creating a bias towards low-flying birds (Kerlinger & Gauthreaux 1984; Kerlinger 1989). Counts of medium-sized and smaller species, such as Honey-buzzards, Levant Sparrowhawks and Red-footed Falcons *Falco vespertinus*, may be particularly influenced by this.
- (iii) *Station position* The survey stations were positioned according to our existing knowledge of migratory patterns, but on days when migration routes shifted dramatically,

either east or west of that anticipated (e.g. because of unusual weather conditions), the survey may have missed many birds. For example, on days with strong easterly winds, the entire axis of migration shifted west, towards the coast (Shirihai *et al.* 2000).

- (iv) *Population fluctuations* Breeding may be more successful in some years than others, affecting both the numbers and proportion of juveniles within the population.

Of these, shifts in the altitude of migration and station position, as well as a significant passage to the east of the study area (see White Stork, below) have been directly observed to affect counts. Currently, there is insufficient evidence to suggest a substantial migration route of raptors in Jordan, and the effect of wind direction shifting the axis to the east of our study area has not been studied.

Species accounts

Each of the following accounts follows a similar format, beginning with a brief introduction describing a species' status as an autumn migrant within Israel, including a summary of the main passage period. This is followed by a synopsis of the key factors which characterise migration through the country, including major passage routes and significant roosting areas. For seasonal totals of all species recorded during the Northern Valleys Survey (NVS) between 1990 and 1999, see table 1.

White Pelican *Pelecanus onocrotalus*

White Pelicans are abundant passage migrants, with the majority following a route across northern, central and western Israel. The main passage occurs between late September and mid November, with few recorded before mid August, or after mid November. Wintering birds continue to arrive until late December, however. The true numbers of White Pelicans migrating through Israel are, in fact, almost twice those recorded during the NVS, since this survey, aimed for the most part at monitoring soaring raptors, misses the peak of White Pelican passage, at the end of October (Leshem & Yom-Tov 1996a).

Like other large soaring birds, this heavy, broad-winged species prefers to migrate over land, but since White Pelican is essentially aquatic, passage occurs within 20 km of the coast, passing over the northeastern and Jezreal Valleys, the coastal plain and western Negev. Many reach Israel via western/central Lebanon and the Mediterranean, with others arriving from the northeast, and roost at northern stopover sites (including the Hula

Table 1. Annual totals of migratory soaring birds counted during the Northern Valleys Survey, Israel, 1990-99.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Mean
White Pelican <i>Pelecanus onocrotalus</i>	42,575	30,584	45,163	30,239	30,733	56,765	28,917	57,042	36,502	10,709	36,923
Black Stork <i>Ciconia nigra</i>	2,936	3,299	1,344	14,100	7,269	16,898	7,403	3,050	3,617	2,342	6,226
White Stork <i>Ciconia ciconia</i>	188,721	235,906	173,677	272,975	293,728	235,084	295,411	530,301	165,624	182,988	257,442
unidentified stork <i>Ciconia</i> sp.	150	7	120	0	0	0	0	0	0	0	28
Honey-buzzard <i>Pernis apivorus</i>	437,433	269,289	228,574	476,565	260,982	221,669	265,630	544,215	286,788	236,127	322,727
Black Kite <i>Milvus migrans</i>	1,734	2,058	1,369	2,331	909	875	1,572	1,328	2,695	2,141	1,701
Red Kite <i>Milvus milvus</i>	0	0	1	1	0	0	1	0	1	0	0
unidentified kite <i>Milvus</i> sp.	3	5	1	0	4	0	6	12	8	0	4
White-tailed Eagle <i>Haliaeetus albicilla</i>	0	0	0	0	1	0	0	0	0	0	0
Egyptian Vulture <i>Neophron percnopterus</i>	161	219	92	201	114	82	63	65	104	59	116
Griffon Vulture <i>Gyps fulvus</i>	62	25	43	83	37	45	31	20	40	36	42
Eurasian Black Vulture <i>Aegypius monachus</i>	0	0	1	0	0	0	0	0	0	0	0
Short-toed Eagle <i>Circus gallicus</i>	3,819	4,548	3,325	3,651	3,288	3,551	2,948	3,674	3,024	409	3,224
Marsh Harrier <i>Circus aeruginosus</i>	1,516	1,550	719	1,614	1,517	1,045	1,881	854	986	583	1,227
Hen Harrier <i>Circus cyaneus</i>	9	6	4	0	6	2	6	1	0	2	4
Pallid Harrier <i>Circus macrourus</i>	26	47	28	37	129	28	33	14	30	78	45
Montagu's Harrier <i>Circus pygargus</i>	55	79	58	88	252	104	206	169	183	129	132
Pallid/Montagu's Harrier <i>Circus macrourus/pygargus</i>	446	533	321	376	352	168	371	219	171	192	315
unidentified harrier <i>Circus</i> sp.	19	35	2	11	39	0	16	3	58	35	22
Northern Goshawk <i>Accipiter gentilis</i>	3	4	4	1	2	0	na	0	2	1	2
Eurasian Sparrowhawk <i>Accipiter nisus</i>	868	1,131	884	797	358	408	504	311	153	152	557
Levant Sparrowhawk <i>Accipiter brevipes</i>	41,722	53,704	37,738	38,667	60,390	32,878	52,804	46,863	52,672	35,890	45,333
unidentified sparrowhawk <i>Accipiter nisus/brevipes</i>	61	144	47	22	26	0	59	30	55	15	46
Common Buzzard <i>Buteo buteo</i>	3	5	0	11	1	0	2	1	0	1	2
Common ('Steppe') Buzzard <i>Buteo buteo vulpinus</i>	1,953	3,619	1,793	1,047	1,608	1,169	523	552	426	366	1,306
Long-legged Buzzard <i>Buteo rufinus</i>	25	27	22	39	44	95	28	28	32	30	37
unidentified buzzard <i>Buteo</i> sp.	318	534	20	7	8	0	4	21	5	5	92
Lesser Spotted Eagle <i>Aquila pomarina</i>	83,701	70,295	58,320	68,009	77,241	73,980	54,922	81,598	67,008	54,370	68,944
Greater Spotted Eagle <i>Aquila clanga</i>	30	62	48	52	30	62	87	28	24	21	44
Steppe Eagle <i>Aquila nipalensis</i>	214	187	181	267	123	83	126	48	49	na	142
Eastern Imperial Eagle <i>Aquila heliaca</i>	3	22	6	25	14	1	10	3	2	2	9
Golden Eagle <i>Aquila chrysaetos</i>	0	0	1	0	0	4	0	2	0	0	1

unidentified eagle <i>Aquila</i> sp.	136	58	9	3	0	0	5	16	6	2	24
Booted Eagle <i>Hieraeetus pennatus</i>	811	1,006	641	669	673	495	741	400	627	467	653
Bonelli's Eagle <i>Hieraeetus fasciatus</i>	8	9	1	0	5	3	0	1	4	2	3
Osprey <i>Pandion haliaetus</i>	78	66	34	106	73	127	72	69	73	26	72
Lesser Kestrel <i>Falco naumanni</i>	9	26	9	4	20	5	9	16	34	9	14
Common Kestrel <i>Falco tinnunculus</i>	3	41	2	28	60	144	17	38	45	30	41
Red-footed Falcon <i>Falco vespertinus</i>	4,200	2,392	2,487	1,613	445	252	962	10,877	9,016	69	3,231
Merlin <i>Falco columbarius</i>	2	0	0	0	0	0	0	0	0	0	0
Hobby <i>Falco subbuteo</i>	19	71	10	7	41	79	22	33	22	12	32
Red-footed Falcon/Hobby <i>Falco vespertinus/subbuteo</i>	187	274	81	29	100	105	0	0	34	0	81
Eleonora's Falcon <i>Falco eleonorae</i>	15	12	4	18	7	0	9	4	3	0	7
Lanner Falcon <i>Falco biarmicus</i>	1	1	0	0	1	0	1	0	0	na	0
Saker Falcon <i>Falco cherrug</i>	0	0	1	0	2	0	1	0	0	0	0
Peregrine Falcon <i>Falco peregrinus</i>	17	15	4	4	5	0	4	3	13	5	7
unidentified falcon <i>Falco</i> sp.	252	529	85	169	368	0	35	17	74	95	162
unidentified raptor	728	793	319	138	257	381	316	228	127	125	341

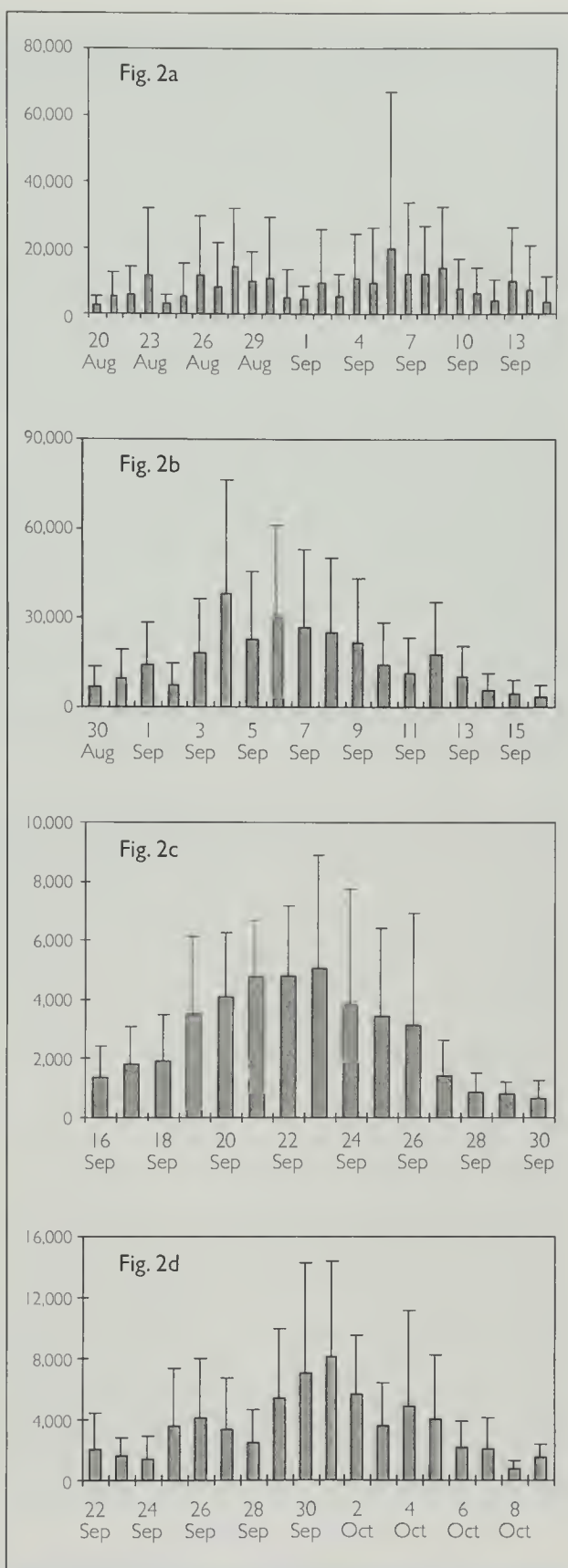


Fig. 2. Mean daily migration counts for (a) White Stork *Ciconia ciconia*, (b) Honey-buzzard *Pernis apivorus*, (c) Levant Sparrowhawk *Accipiter brevipes*, and (d) Lesser Spotted Eagle *Aquila pomarina*, Northern Valleys Survey, Israel, 1990-99. Error bars show standard deviation. The figures show the middle 90% of autumn passage (see text) of the four species concerned.

Valley, Sea of Galilee, Beit Shean and Jezreal Valleys, Emeq Zevulon, Ma'agan Mikhael and Emeq Hefer). Typically, birds leave these stopover sites between 08.30 and 09.00 hrs, moving south directly to northern Sinai, crossing Israel within about eight hours (Leshem & Yom-Tov 1996a).

Black Stork *Ciconia nigra*

This fairly common autumn passage migrant migrates principally on a north-south or northeast-southwest axis, with passage concentrated over the east of the country, including the Golan, north-eastern valleys, Jordan River Valley, Dead Sea region and the Negev mountains, and only small numbers recorded within the coastal strip and extreme south. Extreme passage dates range from 6th August to late November, with most occurring between mid September and mid October. A few overwinter, chiefly in the northeastern valleys.

Table 1 reveals significant annual fluctuations during this survey, and that numbers peaked between 1993 and 1996. This period coincided with the manning of the easternmost count stations from late September into October, when most Black Storks occurred. In most other years, counting effort at this stage of the season was focused in the west, where Levant Sparrowhawks and Lesser Spotted Eagles predominate.

White Stork *Ciconia ciconia*

White Stork is an abundant passage migrant, with most movements through the northeast, east-central and north-central Negev. Smaller numbers occur irregularly in the southern Arava and Eilat regions, and throughout the west of Israel. Extreme passage dates range from 13th July to 10th November. During the NVS, the peak date varied from 23rd August to 7th September (mean 6th September), on which 13-36% of the annual total was recorded (mean 24%). Compared with that of other abundant species, passage of White Storks is relatively prolonged, and the number of days taken for the middle 90% of the population to pass ranged from 15 to 33 (mean 23). Numbers decline rapidly after mid September (fig. 2a).

The high variation in annual counts (table 1) is almost certainly due to changes in the migratory axis. Based on observations of numbers passing the easternmost survey station, in the Rift Valley near the border with Jordan, it is clear that large numbers pass through Jordan. During 1991, a survey in the Negev desert, 170 km south of the northern valleys, counted 140,000 White Storks in the first week of September. These birds were not reported by the NVS, having clearly entered Israel farther south (IOC unpublished data). In 1994, radar studies established that many did pass through Jordan, and were not counted by this survey. In the NVS study area, approximately 90%

of migrants moved through on a narrow front ranging between 53 km and 61 km from the coast. In some years, an estimated 50% of the White Storks passing through Israel were not counted by the NVS, and instead crossed Israel between the Beit Shean Valley and the Dead Sea (thus south of our study area). The overall trend in numbers of migrants since 1990 is stable.

Unlike other species discussed here, White Storks reaching Israel may gather in huge concentrations to feed and drink before continuing with their migration. Nonetheless, there remains a high mortality among young birds, many of which die from exhaustion through dehydration, especially in the dry desert regions.

White Storks migrate principally in huge concentrations via the western Black Sea route (crossing the Bosphorus), and after passing through the Levant enter Africa on a broad front via Sinai and the Gulf of Suez.

Honey-buzzard *Pernis apivorus*

Throughout northern and western Israel, Honey-buzzard is an abundant autumn passage migrant. Elsewhere, including Eilat and the southern Arava region, only small numbers occur. Extreme passage dates for the country are 4th August and 22nd November. In the NVS, the middle 90% of migrants passed through between 30th August and 16th September, on average, with the peak date ranging from 1st to 13th September (mean 4th September), when 13-28% (mean 19%) of the total annual count was recorded (fig. 2b). The peak migration pulse usually lasts for several days, e.g. in 1997, from 6th September to 9th September (the peak day), an extraordinary total of 361,921 birds was logged, with consecutive daily counts of 99,416, 68,545, 93,515 and 100,445.

Annual fluctuations appear to be related to a combination of altitude of migration, counting effort and, perhaps, annual breeding success; but they do not seem to be linked to wind direction, which is steady and fairly constant every year, nor to an eastward shift of the migratory axis. On many occasions, large numbers of Honey-buzzards have been recorded on radar but missed by ground observers. If a shift in migratory axis towards Jordan was responsible for the annual variations, it would be expected that higher than usual numbers would have been recorded from easternmost stations in years when counts in the west were low, but this was not the case.

Passage through the Middle East appears to be comprised of Russian and east European birds, while those from western Europe, east to Sweden and central Europe, appear to use the Strait of Gibraltar and central Mediterranean routes (Hake *et al.* 2003). Based on counts at raptor migration watchpoints, the global population of Honey-



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84 & 85. White Pelicans *Pelecanus onocrotalus* on migration, northern Israel, October 2002. White Pelicans are abundant autumn passage migrants through Israel, with peak passage at the end of October. Favoured sites are used for staging; the flock in plate 85 is pictured at the Hola wetlands.

buzzard consists of several hundred thousand pairs, and numbers appear stable (Shirihai et al. 2000). Hagemeyer & Blair (1997) also considered European breeding populations to be stable.

In the northern valleys region, Honey-buzzards leave their roosts about an hour after sunrise, and

between 07.00 hrs and 09.30 hrs the migratory axis remains in the east, with passage usually concentrated over one or two stations (mainly 44-50 km inland). During the following hour, the migratory axis moves slightly to the west (41-44 km inland) but by 11.00 hrs passage has switched

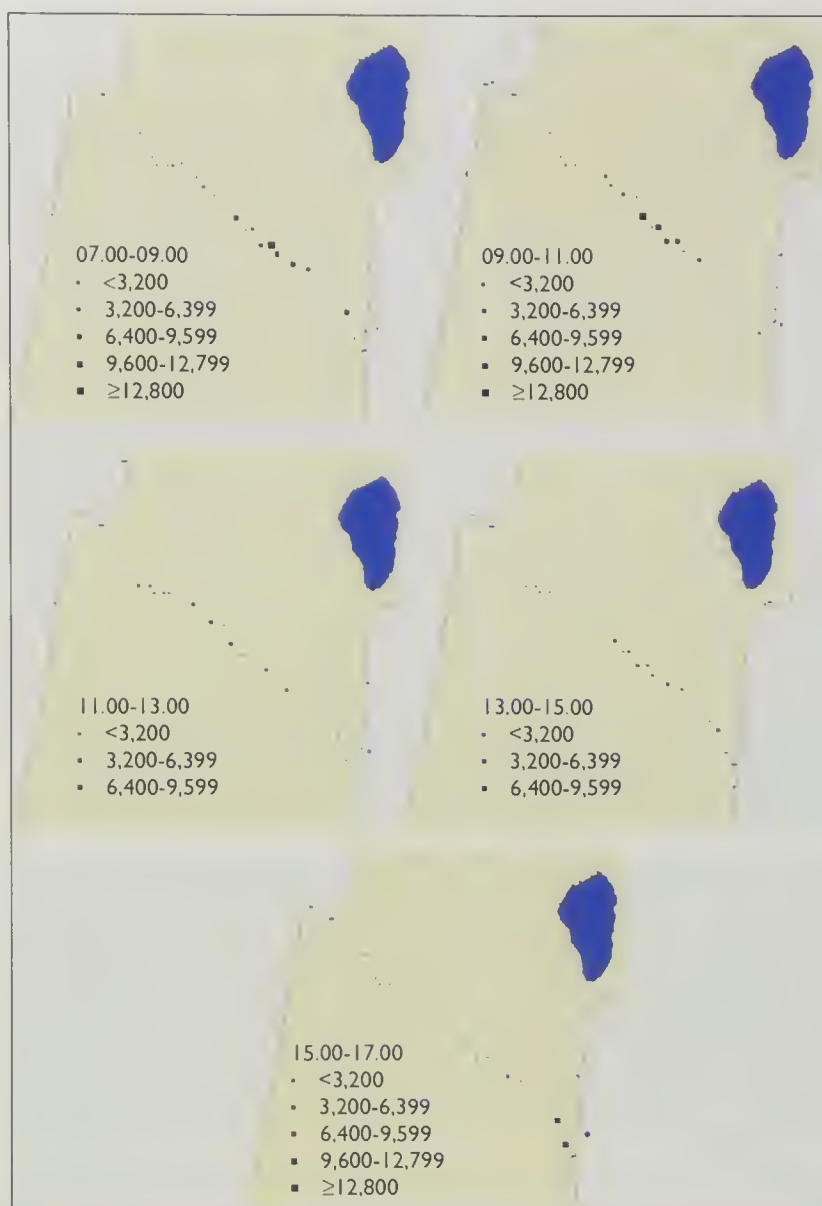


Fig. 3. Spatial and temporal distribution of Honey-buzzard *Pernis apivorus* passage, Northern Valleys Survey, Israel, 1990-1995. Maps show the mean annual counts at each observation site during five time intervals, using data for the middle 90% of the migrant population (see text). Time intervals are: 07.00-09.00 hrs, 09.00-11.00 hrs, 11.00-13.00 hrs, 13.00-15.00 hrs, 15.00-17.00 hrs (shown from left to right, top to bottom).

abruptly to the west (mainly 17-30 km inland) and has almost ceased over the eastern stations. A similar pattern persists until about 13.30 hrs, when the axis starts to shift back towards the east. Until 16.30 hrs, passage is again mainly concentrated over the eastern stations (50-56 km inland), and continues to edge farther east until the evening, when many birds are seen passing several kilometres over the Jordanian border. This diurnal pattern (fig. 3), observed in most, but not all, years, reflects the progression of a sea-breeze front from the west, and sometimes birds can be observed correcting for drift late in the day, gliding in a more westerly direction to reach roost sites in the central mountains of Israel. On some days, the migration axis remained in the

east throughout the day, while on other days a simultaneous western and eastern axis was noted. It seemed that on days characterised by a steady eastern axis, a strong westerly wind was already apparent during the early part of the morning. Observations during the earlier Kfar Qassem Surveys (KQS) showed Honey-buzzards migrating closer to the coast (13-47 km) than in the NVS (26-61 km).

Honey-buzzards are strongly concentrated in the Levant in autumn, birds passing either side of the Black Sea (and possibly also those crossing the Caucasus farther east) being funnelled through the region and into Africa via Sinai and the Gulf of Suez; very few are recorded in Arabia at this season.

[Oriental Honey-buzzard *Pernis ptilorhyncus*]

Although not recorded during the NVS, this species is a rare passage migrant through Israel, and it is thought that many may pass undetected. Recently, it has been discovered to be occurring with increasing frequency, during both spring and autumn migration (Granit 2003). Two were recorded in Israel in 1999 and eight in 2000, with one in the northern Negev in 1999 and two at Kfar Qassem in 2000, between 1st and 28th September. Oriental Honey-buzzards follow similar routes to, and migrate with, other raptors, mainly

European Honey-buzzards, and, owing to a lack of knowledge and field experience, have probably been overlooked. In addition, counting conditions in the northern valleys are unfavourable for detecting Oriental Honey-buzzards within huge flocks of European Honey-buzzards.

Black Kite *Milvus migrans*

Black Kite is a relatively common autumn passage migrant, which occurs throughout the country on a broad front, the majority in the north and west. In the NVS, 90% of passage occurred between 31st August and 4th October, with the early 5% between 22nd and 30th August and the remainder from 5th to 13th October. In most years, peak numbers occurred on or around 9th September,



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86. Juvenile Black Stork *Ciconia nigra*, northern Israel, September 2002.



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87. White Storks *Ciconia ciconia*, migrating through northern Israel, September 2002. White Storks are abundant passage migrants through Israel in autumn, with most occurring in late August/early September. Their migration track is concentrated along the eastern side of Israel, and radar studies have revealed that large numbers pass through Jordan too.

when up to 20.4% of the migrating population passed through in the course of a single day. A secondary peak, often involving hundreds of birds, occurred in late September, and may reflect, at least in part, the arrival of wintering birds.

Counts from the NVS (table 1) are appreciably higher than those recorded during the KQS, where annual totals ranged from 293 to 1,195, with a

mean of 676. Both autumn surveys have shown a trend of increasing numbers, which may reflect the higher numbers now wintering in Israel (most European populations appear stable or in slight decline; Hagemeijer & Blair 1997).

Despite the moderate or large numbers of migrants passing to the east of the Black Sea (with fewer at the Bosphorus), the pattern of migration

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88 & 89. Black Kites *Milvus migrans*, Hula Valley, northern Israel, September 2002; adult (above) and juvenile (below). In the first half of September, Black Kites are frequently seen migrating within large streams of Honey-buzzards *Pernis apivorus*. Consequently, they often follow the same migratory axis and daily pattern of migration as that species, and share roosting sites.

across the Middle East as a whole is still poorly known, and the main crossing point into Africa remains unidentified. Autumn surveys in Israel and Arabia involve comparatively small numbers only.

This could be explained by this species using a broader, more dispersed migration front in autumn (as indicated by the regional records summarised in Shirihai *et al.* 2000).

Red Kite *Milvus milvus*

Red Kite is essentially a vagrant to Israel in winter, reported on four occasions during the NVS, always in late September. These records have yet to be reviewed by the national rarities committee.

White-tailed Eagle *Haliaeetus albicilla*

A rare winter visitor to Israel that has been recorded just once during the NVS, in 1994.

Egyptian Vulture *Neophron percnopterus*

Egyptian Vultures are fairly common on passage, migrating on a broad front throughout the country, although the majority are seen in the west. They occur from mid August to mid November, and 90% of passage in the NVS was between 24th August and 8th October. Within this period, migrants were most numerous from 10th September until 2nd October, and peaked on or around 20th September, when up to 15.6% of the annual total passed on a single day.

Annual totals in the NVS (table 1) were appreciably lower than those recorded during the earlier KQS (range 242-474, mean 322). The lower numbers recorded during the 1990s appear consistent with trends in breeding data from Europe and the Middle East. It is also possible, however, that the greater distance between counting stations in the NVS affected the ability of counters to record this species – the mean distance between stations in the KQS was 1.6 km in the west (where passage

was concentrated) compared with 3 km in the NVS – and this may have exaggerated the population decline between the two surveys.

Griffon Vulture *Gyps fulvus*

Apart from a resident breeding population, Griffon Vulture is a scarce passage migrant throughout Israel. Most birds migrate through northern and western regions between mid September and early October, while in the south they typically appear later in October and into November. This difference in timing between the north and the south is apparently related to *Aquila* eagle passage, since in northern and western areas, Griffon Vultures are associated with the heavy passage of Lesser Spotted Eagles, while in the Eilat area, they typically associate with large flocks of migrating Steppe Eagles, which occur later in the autumn.

Eurasian Black Vulture *Aegypius monachus*

A rare winter visitor to northeast Israel, few are reported on migration and these typically occur later than the main survey period, mainly in October and November. Only one was recorded during the NVS, on 15th October 1992.

Short-toed Eagle *Circaetus gallicus*

Short-toed Eagle is a common passage migrant, occurring principally in the northern, central and western regions of the country. Extreme passage dates range from 17th August to 21st November.



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90. Adult Griffon Vulture *Gyps fulvus*, Gamla, northern Israel, October 2002. The long-term and, in many areas, dramatic decline in numbers of this species has not been reflected by decreasing numbers of migrants recorded in the Middle East (though numbers here have always been relatively small, and concentrated in the Levant).

Following the recent collapse of *Gyps* vulture populations throughout the Indian subcontinent, however, there is grave concern that migrant populations of Griffon Vultures breeding in Asia may soon be affected in a similar way.

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Hadoram Shiriha



91 & 92. Short-toed Eagles *Circaetus gallicus*, during passage through northern Israel, October 2002. Short-toed Eagles are common autumn passage migrants in Israel, mainly in the northern, central and western regions of the country. During the Northern Valleys Survey, most were recorded between late September and mid October:

During the NVS, most birds were observed between 23rd September and 13th October, and peaked on or around 28th September, when up to 9.8% of the annual total occurred on a single day.

The mean annual total from the NVS (3,224) is half that recorded in the KQS. The reasons for this discrepancy may be similar to those described for Egyptian Vulture (see above), and thus exaggerated by different survey conditions. During the study period, the annual total of migrants counted has declined significantly ($r^2 = 0.49$, $P = 0.02$), although the exceptionally low count in 1999 (409) affected this result disproportionately. Short-toed Eagle has, however, like many other large raptors, undergone a substantial decline and range contraction since the nineteenth century.

Most Eurasian birds migrate to Africa via the western Black Sea route, funnelling through the Levant (using a more westerly course in autumn than in spring) and into Africa via the northern Gulf of Suez.

Marsh Harrier

Circus aeruginosus

This is an uncommon, broad-front passage migrant throughout Israel, although rare in the southeast. In the NVS, 90% of birds passed through between 28th August and 16th October, with peak passage between 10th September and 5th October.

The NVS annual totals (table 1) are appreciably higher than those from the KQS (range 476-1,237, mean 848), and these differences are thought to reflect the location of survey sites, in particular the establishment of stations in eastern Israel during the NVS.

As for other harrier species (see below), counts during the NVS involved only birds on direct passage with other raptors, but this species will also interrupt its migration to feed in suitable habitat, and may form loose concentrations in favoured areas such as the Beit Shean Valley.

Hen Harrier *Circus cyaneus*

Hen Harrier is a late migrant to Israel, occurring from mid October, and thus rarely encountered during the NVS (table 1). Essentially, this is a winter visitor to the lowlands in the north and centre of the country.

Pallid Harrier *Circus macrourus*

This is a scarce broad-front passage migrant throughout the country, principally in northern, central and western areas. Extreme passage dates for Israel are 26th August and late November; during the NVS, most occurred between 20th September and 10th October.

Annual totals logged in the NVS (table 1) were marginally higher than during the KQS (range 21-57, mean 35). This increase is primarily due to

improved knowledge of the identification features used to separate female and immature *Circus* species, since long-term declines have been reported from many areas (Hagemeijer & Blair 1997).

Montagu's Harrier *Circus pygargus*

In autumn, Montagu's Harrier is a scarce, broad-front passage migrant throughout the country, with most recorded in northern, central and western regions. Extreme passage dates in Israel are 10th August and 10th November, with most observations during the first half of September in the NVS. As for Pallid Harrier, annual totals are appreciably higher than those during the KQS (range 12-51 birds, mean 24), also presumably as a result of better knowledge of identification features.

Unidentified Pallid/Montagu's Harrier *Circus macrourus/pygargus*

Many of the 'slim-winged' harriers counted during the NVS could not be identified, owing to the difficulty of distinguishing juveniles and females to species level at distance. The annual totals of such unidentified harriers are thus substantial, with a peak of 533 in 1991 (table 1).

Northern Goshawk *Accipiter gentilis*

Northern Goshawk is a rare winter visitor to forested regions of the north and centre of Israel. It is also rare on migration, being recorded chiefly in October and November, and thus later than the NVS study period.

Eurasian Sparrowhawk *Accipiter nisus*

This is a relatively common, broad-front passage migrant which occurs throughout the country, although the majority pass through northern, central and western regions. In the NVS, 90% of passage was recorded between 12th September and 18th October, on average, with most being reported between 2nd and 15th October, and peak counts towards the end of this period; stragglers can occur until late November. Annual totals in the NVS were appreciably lower than those during the KQS (range 385-1,761, mean 897). It is clear that this species is much more widespread than, and not associated with the heavy passage of, Levant Sparrowhawks.

Levant Sparrowhawk *Accipiter brevipes*

Levant Sparrowhawk is an abundant passage migrant in autumn, principally in western Israel. In some years, the passage may drift to the east, and large flocks can reach the Arava Valley and Eilat. Extreme passage dates in Israel extend from 1st September to 20th November (Shirihai 1996). During the NVS, counts peaked in 1994, when 60,390 birds were recorded. The middle 90% of the

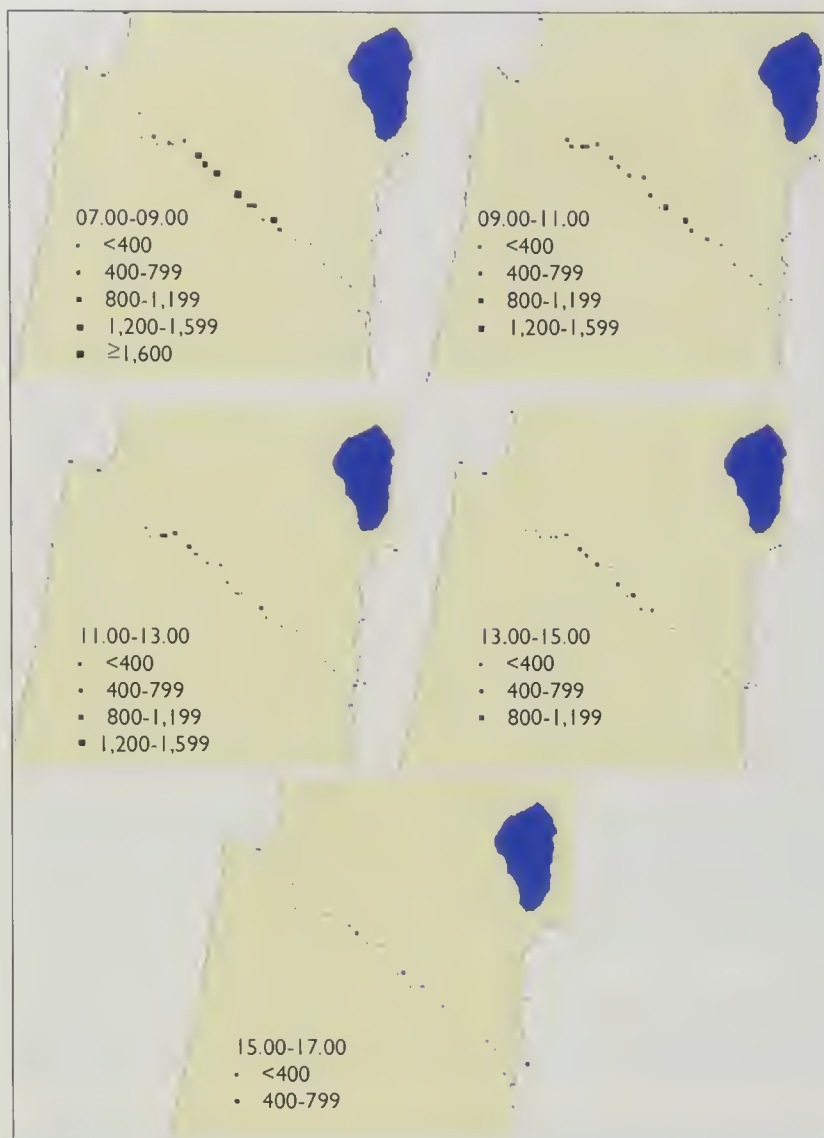


Fig. 4. Spatial and temporal distribution of Levant Sparrowhawk *Accipiter brevipes* passage, Northern Valleys Survey, Israel, 1990-1995. Maps show the mean annual counts at each observation site during five time intervals, using data for the middle 90% of the migrant population (see text). Time intervals are: 07.00-09.00 hrs, 09.00-11.00 hrs, 11.00-13.00 hrs, 13.00-15.00 hrs, 15.00-17.00 hrs (shown from left to right, top to bottom).

annual total was recorded between 16th and 29th September, on average, with the peak dates between 19th and 26th September (mean 23rd September). Peak day counts involved 11-26% (mean 18%) of the annual total. Annual fluctuations may be due to a range of factors, including breeding success and migration altitude – the small body size of Levant Sparrowhawk makes it particularly difficult to census birds soaring at high levels, and since the mean migration altitude varies between years, this will certainly have affected counts.

In the NVS, the migratory front passed between 17 km and 47 km inland of the coast, although on some days it reached up to 61 km inland, mainly in the afternoons. Conversely, during periods of strong easterly winds, passage occurred within 12 km of the coast (fig. 4). Unlike that of Honey-buzzards and

Lesser Spotted Eagles, passage may continue across the entire migration front throughout the day without any obvious shift in pattern.

Autumn passage within the Middle East is concentrated markedly through the Levant. Migrants principally use the western Black Sea route, cross Turkey and move south through the Levant, following a more westerly route than in spring, then cross into Africa via Sinai and the Gulf of Suez on a broad front. Information concerning the wintering and breeding areas, and population size and structure of Levant Sparrowhawk is extremely limited, and data collected in Israel during autumn migration are essential to our knowledge of population size, composition and dynamics. Our surveys have shown that the overall migratory population has remained broadly stable since 1990.

Steppe Buzzard *Buteo buteo vulpinus*

Steppe Buzzards are relatively common passage migrants through Israel and migrate on a broad front, although the bulk are observed in the east. Early and late dates for the country are 10th August and 29th November; while 90% of passage in the NVS occurred from 17th September to 21st October, peak counts occurring between 25th Sep-

tember and 10th October.

During the NVS, a significant decline in annual totals was apparent ($r^2 = 0.68$, $P = 0.003$; see table 1). Using radar data to augment direct observations, it is clear that the great majority of migrants are concentrated in eastern Israel, which represents the western margin of the species' passage corridor (birds from either side of the Caspian Sea move on a broad front across Jordan and Iraq, then across Arabia to the Bab al Mandab; Shirihai *et al.* 2000). Those following the western route, across northern Israel (a fraction of the total numbers moving through the Middle East in autumn), frequently join with other species, particularly Lesser Spotted Eagle, which shows similar migration patterns.

Long-legged Buzzard *Buteo rufinus*

Long-legged Buzzard is chiefly a resident breeding



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93. Juvenile Marsh Harrier *Circus aeruginosus*, northern Israel, September 2002.



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94. Juvenile 'Steppe Buzzard' *Buteo buteo vulpinus*, northern Israel, October 2002. Steppe Buzzards are relatively common, broad-front passage migrants through Israel, whereas only tiny numbers of the nominate form of Common Buzzard are recorded.

species in Israel, but additional birds winter in the lowlands of the north and centre. This species was rarely encountered during the NVS (see table 1), which accurately reflects the small numbers passing through Israel in autumn.

Lesser Spotted Eagle *Aquila pomarina*

This species is an abundant autumn migrant, occurring principally in western parts of Israel. In the NVS, early migrants were noted from 22nd August, but the middle 90% were recorded between 22nd September and 8th October. Peak dates varied between 25th September and 5th October (mean 1st October), when 13-39% (mean 21%) of the total passage may occur. Annual variation in numbers during the NVS was fairly low, and relates mainly to breeding success and to weather conditions encountered on migration to the north, in particular at the Bosphorus. Alon *et al.* (1992) showed that low-pressure systems over the Bosphorus can delay migration of Lesser Spotted Eagles by several days. On such occasions, tens of thousands of eagles may gather in a small area and continue their migration only after weather conditions improve. As a result, huge numbers of eagles may appear in the northern valleys during the course of just one day. During these conditions, when passage is concentrated in both time and

space, counting is much more efficient and accurate.

The axis of migration remained relatively constant, with 90% passing 17-42 km from the coast. Like Honey-buzzard passage, this is farther east than during the KQS, where the majority passed 12-18 km from the coast (Dovrat 1991). In late morning, the axis shifted farther west, though this is less apparent than for Honey-buzzards (above), while in the afternoon, the axis moved east again. Migrating Lesser Spotted Eagles use traditional roosting sites, and exceptional numbers seen within a short period in mid morning in some years suggest that these birds had roosted nearby. For example, on 4th October 1994, 16,858 were counted between 08.30 and 10.30 hrs at just two stations. On peak migration days in other years, birds moved across the entire front throughout the day, as in 1990 when 24,000 were counted from stations 15-43 between 09.00 and 15.00 hrs.

In recent years, ground-based observations of this species have been supported by satellite tracking (Meyburg *et al.* 2000, 2002). This work confirms that most autumn migrants skirt the western Black Sea coast, although there is some evidence to suggest passage on a broad front across Turkey. Passage becomes increasingly concentrated through the Levant, including Israel, and most appear to enter



95. Levant Sparrowhawks *Accipiter brevipes* and Lesser Spotted Eagles *Aquila pomarina*, on migration, northern Israel, September 2002. In contrast to other species which typically migrate in continuous streams on peak days, Levant Sparrowhawks characteristically form large, compact, and widely spaced flocks, of up to 3,000 individuals (though most flocks are not more than 1,000).



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96. Lesser Spotted Eagle *Aquila pomarina* and Short-toed Eagle *Circaetus gallicus*, migrating through northern Israel, October 2002. On migration, the behaviour of Short-toed Eagle closely mirrors that of Lesser Spotted Eagle. Not only do they migrate together, but they frequently mingle during the day and share the same roosts.



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97. Juvenile Lesser Spotted Eagle *Aquila pomarina*, northern Israel, October 2002.

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98. Juvenile Greater Spotted Eagle *Aquila clanga*, northern Israel, October 2002. Greater Spotted Eagle is a scarce late-autumn migrant through Israel, although some may pass undetected within large flocks of Lesser Spotted Eagles *A. pomarina*, with which this species frequently migrates.

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99. Adult Steppe Eagle *Aquila nipalensis*, Eilat, southern Israel, October 2002. In autumn, Steppe Eagles migrate through the Middle East on a broad front; most of those passing through Israel occur in the south and east, and consequently numbers recorded during the Northern Valleys Survey were relatively small.

Africa via the northern Sinai Peninsula, crossing the Gulf of Suez chiefly at the northern end.

Although the population moving through northern Israel appears currently stable, a marked decline was detected in the late 1980s, during the KQS. The mean annual total during 1982-86 was 108,527, but in 1987 only 81,429 were counted (and the mean annual total in the NVS was 68,944). This sudden decline seems to reflect a real decline in the world population (Alon 1998; see also Shirihihi *et al.* 2000), perhaps caused by some major catastrophe on the breeding grounds, such as the Chernobyl disaster in May 1986. Clearly, this subject demands further study, and data from breeding areas should be combined with that from migratory bottlenecks.

Greater Spotted Eagle *Aquila clanga*

Greater Spotted Eagle is chiefly a winter visitor to Israel, mainly in lowlands of the north and centre, and also a scarce late-autumn passage migrant (mainly from mid October onwards). Peak passage in the NVS was observed between 5th and 20th October, and doubtless continued after the end of the normal survey period.

Steppe Eagle *Aquila nipalensis*

This species is a near-abundant passage migrant through Israel, principally recorded in the south and east, and generally scarce in northern, central and western parts; consequently, only small numbers were recorded during the NVS (table 1). Steppe Eagle is a late migrant, and NVS counts were concentrated between 6th October and 15th November (i.e. mainly after systematic survey observations had ceased). Those recorded were predominantly juveniles, followed by immatures, while adults were rare.

In autumn, most passage through the Middle East occurs on a broad front across the Arabian Peninsula. Although significant numbers were recorded during the 1980s at Eilat and Suez, subsequent autumn surveys at Eilat showed a consistent decline (also witnessed in spring surveys there). Numbers decreased significantly between 1986 and 1987, followed by a steady decline which stabilised in the late 1990s. In the 1980s, all autumn counts at Eilat exceeded 10,000, the maximum being 24,246 in 1980, whereas in the late 1990s, counts varied between 3,242 and 1,278. The sharp decline in numbers, especially in autumn, appears to correlate with a substantial reduction in the breeding population, especially in the west of the breeding range, the main source of the autumn passage birds in the Levant (Shirihihi *et al.* 2000).

Eastern Imperial Eagle *Aquila heliaca*

Eastern Imperial Eagle is a scarce migrant through Israel in autumn, as reflected in the NVS counts

(table 1). Passage is often protracted and appears to be split between a route through the west of the country, where it often accompanies Lesser Spotted Eagles and, later in the autumn, a route through the south, when it is often seen with Steppe Eagles (Shirihihi 1996). It is more numerous as a winter visitor, mainly to lowlands in the north and centre, and the northwest Negev.

Golden Eagle *Aquila chrysaetos*

Golden Eagle is a resident breeder in Israel, and rarely recorded on migration; it was observed in just three years during the NVS (table 1).

Booted Eagle *Hieraetus pennatus*

This is an uncommon passage migrant, most birds passing through northern, central and western regions, and just small numbers in the south and east. The passage period of Booted Eagle is protracted, with early and late dates of 21st August and 28th November, and this is the only migratory eagle to make regular staging or feeding stops, which undoubtedly adds to the time taken to cross the country. During the NVS, most birds occurred between 10th and 30th September. Numbers recorded during the KQS were higher, which is probably attributable to differences in survey station position and distribution.

Bonelli's Eagle *Hieraetus fasciatus*

A few (resident) pairs of Bonelli's Eagles breed in Israel, but numbers of passage migrants and winter visitors are small. This species was recorded in eight of the ten years of the NVS, but totals never reached double figures.

Osprey *Pandion haliaetus*

Osprey is a scarce passage migrant in Israel, principally in the north and west, and mainly between mid September and mid October. On migration, Ospreys use a 'jump' strategy, making several mid-passage stopovers to feed (Hake *et al.* 2001; Kjellén *et al.* 2001).

Lesser Kestrel *Falco naumanni*

Lesser Kestrel is a scarce but widespread migrant, moving on a broad front across Israel, and was recorded in only small numbers during the NVS. It is otherwise a summer visitor, breeding in the north and centre of the country.

Common Kestrel *Falco tinnunculus*

This is a common resident breeder in Israel with only small numbers of passage migrants recorded. Passage is widespread, occurring on a broad front throughout the country.

Red-footed Falcon *Falco vespertinus*

This is a relatively common passage migrant,

recorded principally in the north and west of the country. Passage is concentrated into a short period between late September and mid October. Marked annual fluctuations (table 1) reflect the influence of prevailing weather conditions. Following rainy days with low pressure and strong westerly winds, large numbers drift inland after crossing the Mediterranean Sea. Conversely, annual totals are lower in years with no rain during the survey period. These results are linked with altitude of migration, since Red-footed Falcons migrate at lower altitudes in poor weather, and are easier to count. Following days of wet and unsettled weather, large staging concentrations and roosts assemble in the agricultural fields in many parts of the northern valleys, mainly in western and central areas.

Merlin *Falco columbarius*

Merlin is a winter visitor to lowlands in the north and centre of Israel, and the northwest Negev. Few are recorded on migration, and these generally later than the NVS study period, chiefly from mid October onwards.

Hobby *Falco subbuteo*

Hobby is a widespread, broad-front migrant through Israel, generally observed between the

second half of September and early October in the NVS. It is also a summer visitor, breeding in wooded areas of the north and centre.

Eleonora's Falcon *Falco eleonora*

Relatively small numbers occur on passage through the country, and these are largely confined to Mediterranean coastal regions (Shirihai 1996).

Lanner Falcon *Falco biarmicus*

A few breeding pairs are resident in the southern deserts, and only small numbers of migrants or winter immigrants occur (Shirihai 1996).

Saker Falcon *Falco cherrug*

Saker is a rare passage migrant through Israel, generally seen after mid October (i.e. after the main survey period of the NVS). It is also a winter visitor, chiefly to lowlands of the northwest Negev (Shirihai 1996).

Peregrine Falcon *Falco peregrinus*

A scarce but widespread migrant on a broad front through the country, Peregrine is mainly a winter visitor in small numbers to Israel, principally to lowlands in the north and centre, and the northwest Negev.



100. Juvenile Eastern Imperial Eagle *Aquila heliaca*, northern Israel, October 2002.
This species is a scarce autumn migrant through Israel.

Discussion

Although long-term, standardised visual migration counts are an efficient and cost-effective method for monitoring the abundance of diurnal soaring birds, their accuracy as indicators of population changes has been debated owing to potential biases and limitations (e.g. Titus & Fuller 1990, Dunn & Hussell 1995, Allen *et al.* 1996, Leshem & Yom-Tov 1996a). Nevertheless, we are convinced that such surveys provide vital information on populations, especially for species which are difficult to census on their breeding grounds. Certainly, surveys such as the NVS are important for monitoring trends in migrating populations (Bednarz *et al.* 1990; Dunn & Hussell 1995), and for those species which are otherwise difficult to census reliably, perhaps because of low breeding population densities and/or problems of access during the breeding season, monitoring numbers of migrating birds may be the only way of gauging population levels. Furthermore, many species breed in countries with comparatively few active fieldworkers, so even where a species is widespread and/or significant breeding populations occur, the results of other survey methods are often less accurate. In autumn, the NVS (and its predecessor, the KQS) is the only long-term, systematically run, multi-station soaring-bird migration survey in the Middle East, and its regional importance is immense. For some species, notably Levant Sparrowhawk, virtually the only significant and reliable information about breeding populations comes from raptor migration census work, principally in Israel (KQS/NVS in autumn and Eilat in the spring). It is evident from these surveys (see Alon 1998; Yosef 1998; Shirihai *et al.* 2000) that significant declines of several species have occurred in recent years, including both open-country raptors – most importantly Short-toed Eagle, Steppe Buzzard and Steppe Eagle – and woodland breeders – principally Lesser Spotted Eagle. Conversely, White Stork, Honey-buzzard and Levant Sparrowhawk populations appear to have remained stable.

Acknowledgments

We would particularly like to thank the many experienced birders who volunteered their time and provided us with the results of their observations; it would have been impossible to prepare this paper without their commitment and effort throughout this survey programme. We are grateful for financial support provided by the Israel Air Force, which enabled the Northern Valleys Survey to take place. Thanks are also due to the Climatology Branch of the Israel Meteorological Service for providing climate data.

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101. Male Red-footed Falcon *Falco vespertinus*, northern Israel, October 2002. A fairly common passage migrant, through northern and western Israel.

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NOTICE Volunteer surveyors are required for the 2004 Migration Survey in Northern Israel. We are looking for experienced birders only, who are willing to participate for a minimum of four weeks between 15th August and 15th October. All living expenses will be provided. If you are interested, please contact Zev Labinger, 18A Narkisim Street, Tivon 36073, Israel; e-mail: Labinger@netvision.net.il

Looking back

Seventy-five years ago:

'GARGANEY IN SUSSEX IN WINTER. WHILE on the shore at Glyne Gap, between Bexhill and West St. Leonards, on February 3rd, 1929, a friend of mine, Mr. Barlow, found the remains of a small duck that had been badly mauled by Gulls, and the wing of a second. On his return, he gave me the following description: "Crown, dark brown; lower part of face

chestnut, flecked with white; neck and breast, brown lined with black; abdomen, white; wings, blue-grey with long black and white feathers; bill, black." There cannot be any doubt that this was a drake Garganey (*Anas querquedula*) and the odd wing may have belonged to a duck. They had probably perished about January 14th. E. M. CAWKELL.' (*Brit. Birds* 22: 326, April 1929)

Black Grouse in northern England: stemming the decline

Philip Warren and David Baines



Dan Powell

ABSTRACT The range of Black Grouse *Tetrao tetrix* in England has contracted severely in recent decades. A full survey in 1998 estimated the English population at 773 displaying males. The Black Grouse Recovery Project, a partnership project between the Game Conservancy Trust, RSPB, English Nature, Ministry of Defence and Northumbrian Water, was set up in 1996 to help stem the decline. The implementation of project management prescriptions developed from our research has led to a small population increase, to 895 males by 2002. The project, funded until 2006, aims to consolidate numbers in the core population area, and then to expand the range into former haunts, particularly to the south, in the Yorkshire Dales.

Black Grouse *Tetrao tetrix* are found throughout most of northern Europe, extending from Britain in the west across northern Eurasia to eastern Siberia (Cramp & Simmons 1980). In most European countries, apart from those of Fennoscandia and Russia, range contraction and population decline had

begun by the late nineteenth century. Black Grouse are now extinct in Denmark, Hungary and Luxembourg, as well as in many regions of Britain, Holland, Belgium, Germany, Poland, Czechoslovakia, the former Yugoslavia, and Romania. In general, the decline is due to a combination of factors, but the most important

ones are habitat loss, fragmentation and degradation, which have occurred as a result of changes in land use, particularly agricultural intensification.

In Britain, Black Grouse were widespread during the latter half of the nineteenth century and, in addition to their present distribution in Scotland, northern England and north Wales, they occurred on low-lying heathland in southern England, from Norfolk through Hampshire and Dorset to Cornwall, and throughout most of Wales (Gladstone 1924). By 1910, they were extinct in most southern counties, except for remnant populations on Exmoor and the Quantocks, which persisted into the 1960s (Sharrock 1976).

Although the decline had begun by the turn of the twentieth century, the rate of decline and range contraction in Britain has greatly accelerated during the last 50 years. In 1990, a survey estimated 25,000 (95% confidence limits 13,800–36,700) displaying males in Britain (Baines & Hudson 1995), but by 1996 this had fallen to just 6,500 (95% confidence limits 5,000–8,100) (Hancock *et al.* 1999).

With the loss of the last remaining Black Grouse in the Peak District in 1998, the English population is now restricted to the northern section of the Pennines, stretching from Wensleydale (North Yorkshire) to the Scottish Border (fig. 1.). A survey in 1998 found only 773 displaying males in England, although a repeat survey in 2002 showed an increase to 895 males. Survey data from North Wales in 2002 showed a range contraction but, more encouragingly, an increase in numbers from 131 males in 1997 to 243 males in 2002 (Lindley *et al.* 2003).

In northern England, Black Grouse are found in the transition zone between heather (mainly *Calluna*) moorland managed for Red Grouse *Lagopus lagopus* shooting and rough grazing managed by hill farmers for sheep and cattle. The major factors responsible for the decline of Black Grouse in northern England have been the loss of moorland fringe habitats (through either natural reversion to heather moorland,

reseeding to intensively managed grassland and/or a reduction in the quality of remaining habitat through overgrazing by sheep) and the fragmentation of remaining habitat patches (Cramp & Simmons 1980; Baines 1994).

Black Grouse requirements

To support a population of Black Grouse an area needs to contain a mosaic of habitats that will provide resources throughout the year. These should contain Heather *Calluna vulgaris* (for winter food); flower buds of cottongrass *Eriophorum* (for early spring food); the leaves, flowers and seeds of grasses and herbs (for summer food); the buds and berries of trees, such as Downy Birch *Betula pubescens*, Rowan *Sorbus aucuparia* and Hawthorn *Crataegus monogyna* (for autumn and winter food); plus insect-rich areas to provide food for small chicks. Our experience has shown that management for Black Grouse needs to be considered at three different scales: the brood scale, the lek scale and a wider, landscape scale.

(i) Brood scale

The home range of broods is small, typically 10–30 ha. The vegetation sward structure should be varied, with taller heather and rushes

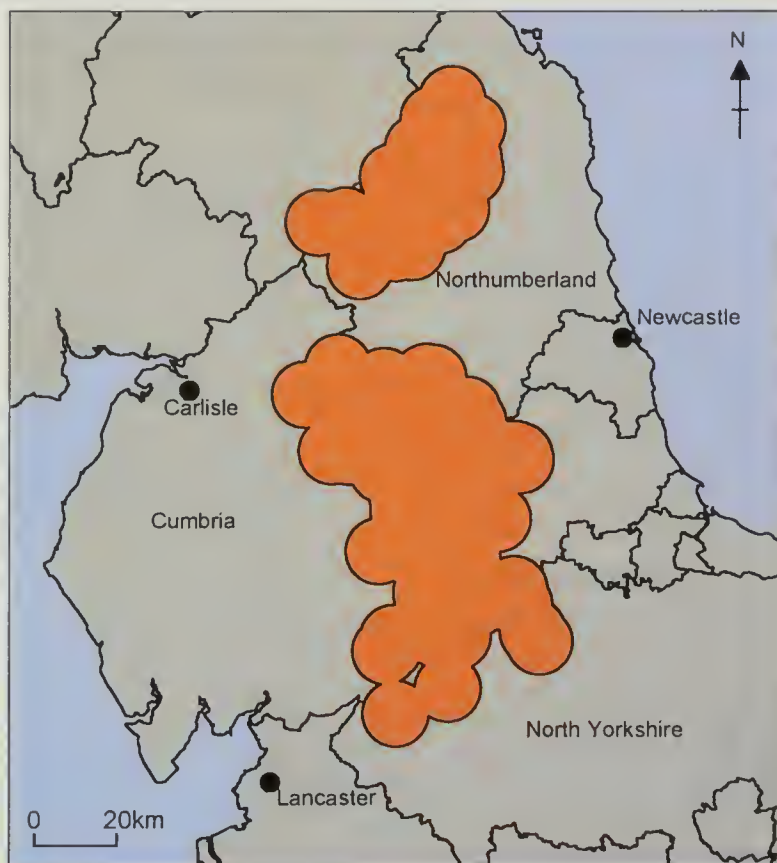


Fig. 1. The distribution of Black Grouse *Tetrao tetrix* in northern England in 2002.

Juncus for nesting, shrubs and trees as escape cover from predators, and shorter vegetation for foraging and to allow chicks to dry out following rain. Favoured brood-rearing habitats have abundant invertebrates, notably larvae of sawflies (Tenthredinidae).

(ii) *Lek scale*

In good, continuous habitat, Black Grouse leks are approximately 2 km apart, and thus most birds attending the leks are found within 1 km of the lek. Suitable habitat needs to be available within this zone at the so-called lek scale. This represents an area of 300-500 ha, and should contain a mosaic of habitats to provide key foods: heath (heather), blanket bog or mire (cottongrass), rough grazing (sawfly larvae/insects), shrubs/trees (berries, buds, catkins in autumn/winter) and herb-rich meadows (leaves of herbs, seeds and buds).

(iii) *Landscape or 'population' scale*

Most young hens leave their natal areas (the median natal dispersal distance of females is about 10 km; Warren & Baines 2002), while cocks and adult hens hardly move at all. This implies that a group of birds centred on a lek may only be viable in the long term if they are within the dispersal range of young hens from neighbouring leks. This degree of connectivity among birds from neighbouring leks is essential to maintain genetic diversity and to prevent inbreeding through the genetic and physical fragmentation of social structure, gene pool and habitat.

Current demographic problems

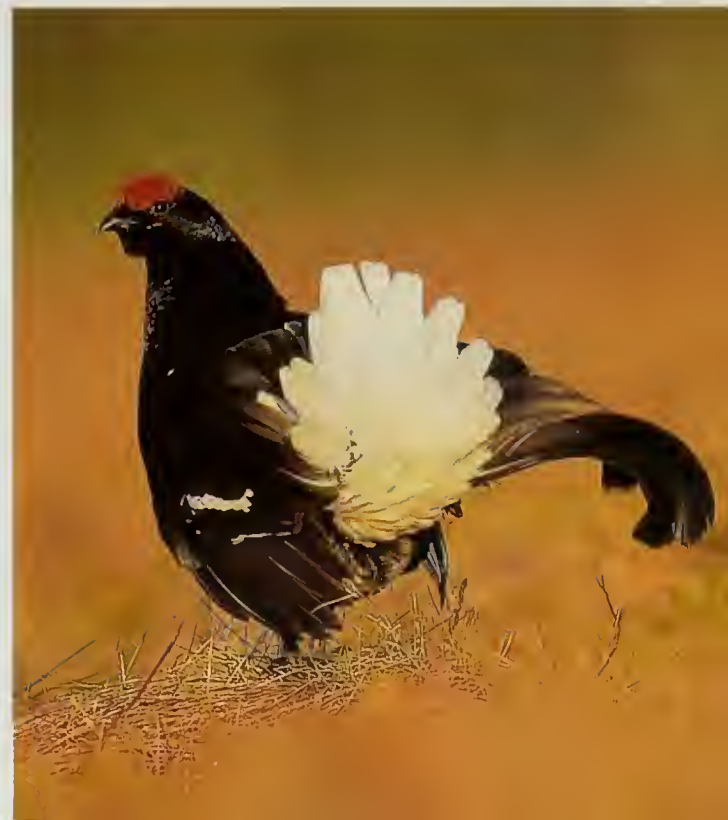
Radio-telemetry studies have shown that the survival rate of adult Black Grouse in northern England is high (72%), in fact the highest recorded by any studies of Black Grouse in Europe (Warren & Baines 2002). Conversely, they breed less well here than in other areas, with only 1.2 chicks fledged per hen (Calladine *et al.* 2002) compared with 1.7 in Wales and 2.1 in the Scottish Highlands (Warren & Baines 2002). Weather conditions after hatching is one of the most important determinants of annual breeding success. Poor years are strongly correlated with high rainfall and low temperatures at the time the chicks hatch, in mid to late June. A combination of wet weather, clutch predation by Stoats *Mustela erminea* and Weasels *M. nivalis* and, relative to Scotland at least, few key insects for the young to feed on (Baines 1996) largely account for the low reproductive success encountered.

Black Grouse Species Action Plan

To help stop the decline of Black Grouse in the North Pennines, the Black Grouse Recovery Project was set up in 1996. This is a partnership project between the Game Conservancy Trust (GCT), the RSPB, English Nature, the Ministry of Defence and Northumbrian Water. The project employs a dedicated project officer (PW), who reports to a steering group of the project partners.

In 1999, Black Grouse became a UK Biodiversity Action Plan Priority Species (UK Biodi-

102 & 103. Displaying male Black Grouse *Tetrao tetrix* at a lek in Finland. David Tipling/Windrush





104. Female Black Grouse *Tetrao tetrix* feeding on willow *Salix* buds.

versty Group 1999), for which the GCT and RSPB are joint lead partners for implementing the components of the plan. Within the framework of the Species Action Plan, the Recovery Project has the following objectives:

- To support and implement the Species Action Plan for Black Grouse in England
- To maintain the overall population size at a minimum of 800 displaying males (the 1998 estimate)
- To promote the recolonisation of those areas between currently isolated populations which were formerly occupied, by 2005
- To restore the species' range to its 1988-91 extent (Gibbons *et al.* 1993), by 2008
- In the long term (20 years), to extend the range and increase population size

To achieve these objectives, the Project has a multi-faceted role, which includes providing free advice to landowners, farmers, government and conservation organisations on management for Black Grouse, monitoring the population and plugging gaps in our knowledge through the development of a research programme. Here, we report on two aspects, grazing and predator control, which our research has shown are par-

ticularly important for the management of Black Grouse populations.

Grazing management

During the first five years, work on the Project was concentrated on monitoring the effectiveness of management prescriptions to enhance Black Grouse breeding habitats on the moorland fringe, at the brood scale and at the lek scale. The key management prescription used was to reduce sheep grazing through entry into agri-environment schemes such as the Countryside Stewardship Scheme (operated by the Department for Environment, Farming and Rural Affairs) and English Nature's Wildlife Enhancement Scheme. By 2000, within those parts of England occupied by Black Grouse, more than 40,152 ha were subject to grazing agreements within the Countryside Stewardship Scheme, with another 29,000 ha in Environmentally Sensitive Area (ESA) agreements. Although there would be some overlap with these two schemes, 26,000 ha were also subject to Wildlife Enhance Scheme agreements. These schemes provide financial incentives to compensate farmers and landowners for the required reduction in stocking levels. One of the options of the Countryside Stewardship



Philip Warren

105. 'Ghyll woodland' planted for Black Grouse *Tetrao tetrix*, Upper Teesdale, Co. Durham, July 2003. The tree species planted are a mixture of Rowan *Sorbus aucuparia*, Hawthorn *Crataegus monogyna*, Downy Birch *Betula pubescens*, Alder *Alnus glutinosa* and willows *Salix cinerea*, *S. caprea* and *S. aurita*. Ghyll woodlands provide additional winter feeding habitats for Black Grouse and are particularly important during periods of lying snow; they also provide escape cover from predatory raptors.

Scheme aims to increase heather cover to 40% by year five of the standard ten-year agreement. This can be achieved by restricting grazing during the first five years to only three months in the summer, when stock density should not exceed one sheep per hectare. We found that reducing sheep grazing (both in numbers and duration) resulted in an average 5% per year increase in numbers of lekking males compared with a continued rate of decline of 2% in control (non-agreement) areas where sheep grazing has remained the same (fig. 2), and 72% more chicks being reared per breeding female (Calladine *et al.* 2002).

After 5-7 years with restricted grazing, the sward can become too tall and thick resulting in poor chick survival and a decline in numbers once more. Consequently, we are currently undertaking an experiment to investigate whether cutting short strips in tall vegetation can create more optimal brood-rearing habitat, and hence maintain greater numbers of Black Grouse throughout the term of the ten-year Stewardship agreement.

Predator management

In northern England, about 90% of Black Grouse occur on the edge of managed grouse moors, where gamekeepers are employed to manage heather and control key predators so that numbers of Red Grouse are maximised for sport shooting. Here, Black Grouse are regarded as indicators of high-quality upland landscape mosaics, which they share with Red Grouse, Grey Partridge *Perdix perdix*, European Golden Plover *Pluvialis apricaria*, Northern Lapwing *Vanellus vanellus*, Common Snipe *Gallinago gallinago*, Eurasian Curlew *Numenius arquata*, Common Redshank *Tringa totanus*, Sky Lark *Alauda arvensis* and Meadow Pipit *Anthus pratensis*.

This close association between Black Grouse and grouse moors strongly suggests that, at least within the open landscapes of the North Pennines, Black Grouse and maybe other ground-nesting birds need to be protected from generalist predators in order to thrive. In this area, we are not aware of any meaningful or long-term increases in the numbers of Black Grouse where predators are not routinely managed, irrespective of improvements in

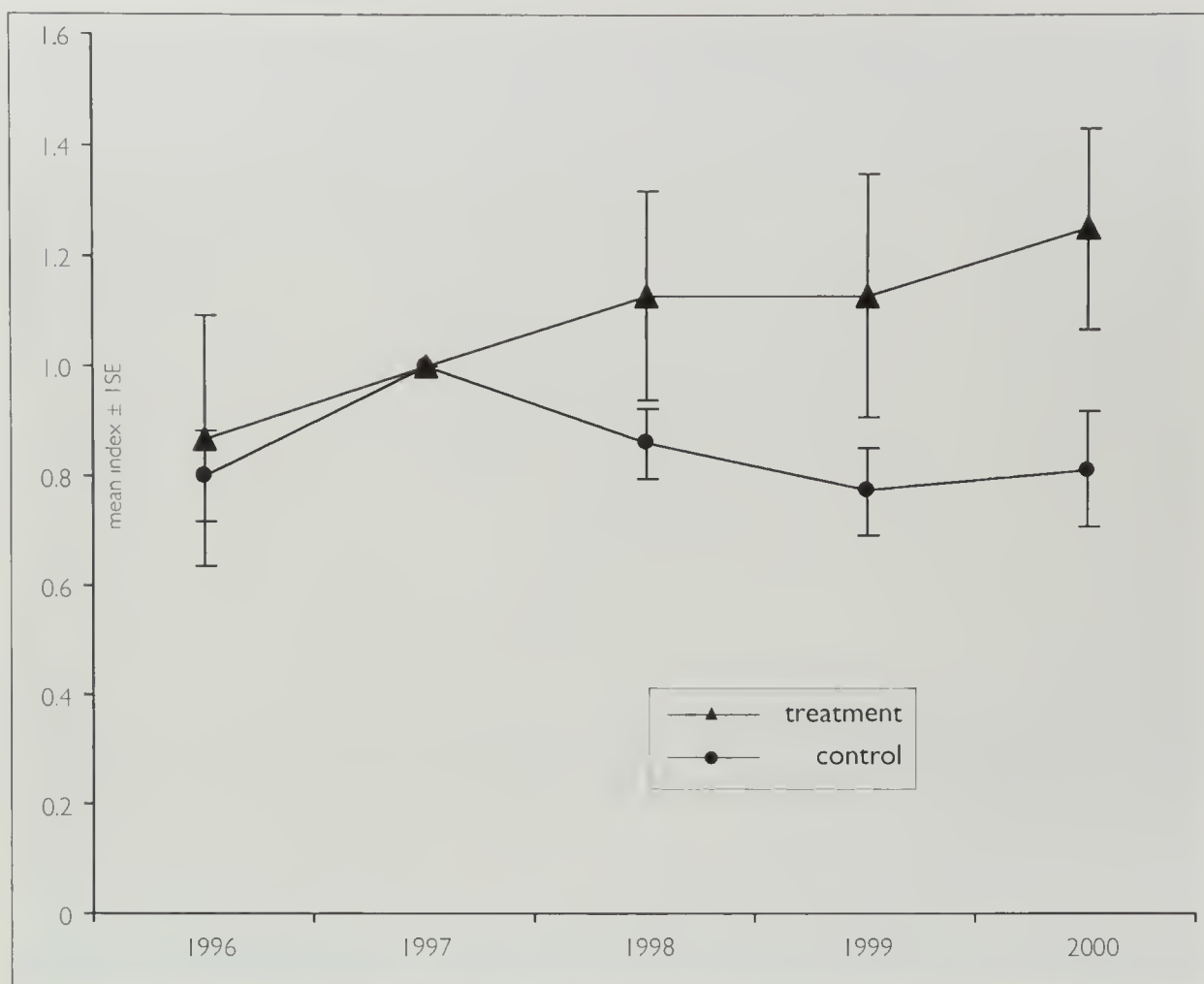


Fig. 2. The increase in the numbers of displaying male Black Grouse *Tetrao tetrix* at sites in northern England where grazing has been reduced (treatment) compared with the declining numbers of grouse at sites where grazing remained unchanged (control).

habitat management. Consequently, inclusion of appropriate predator control within our management prescriptions is imperative to success.

The future

To increase the population of Black Grouse in northern England substantially, the crucial first step is to increase breeding success, by optimising brood habitats and by controlling predators, particularly Stoats, rigorously. The latter should be achieved by employing and encouraging the actions of grouse-moor gamekeepers. At the same time, it is imperative to maintain the current high rates of adult survival.

Female Black Grouse disperse naturally, but in areas where the population is sparse they may travel beyond the current range boundary, where males do not occur. Consequently, since males are normally relatively sedentary, to expand the currently limited species range it may be necessary, once habitat elsewhere has been restored, to facilitate recolonisation by

translocating some males. Following years of high breeding success, 'surplus' males in the core parts of the range could be moved, rather than being shot for sport. We are currently discussing with moor managers the feasibility of such an exchange mechanism.

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Philip Warren

106. When grazing intensity is reduced (to the left of the fence in this photograph), Heather *Calluna vulgaris* recovers and key food plants such as cottongrass *Eriophorum* flower abundantly, creating good breeding and feeding habitats for Black Grouse *Tetrao tetrix*. Upper Teesdale, Co. Durham, July 2003.



Philip Warren

107. This shows another example of a reduced grazing scheme (beyond the fence), which has improved the habitat for breeding Black Grouse *Tetrao tetrix*. New stock fencing can be a fatal hazard for flying grouse, and this fence has been marked with bird flight diverters to reduce the risk of collision. Upper Teesdale, Co. Durham, July 2003.

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Conservation research news

Compiled by Derek Gruar and Len Campbell



A glimmer of hope for Capercaillie?

Increasing populations of Red Kite *Milvus milvus*, Corn Crane *Crex crex* and Cirl Bunting *Emberiza cirlus* within the United Kingdom are rightly seen as conservation success stories, but unfortunately other species are not faring so well. Declining farmland birds such as Sky Lark *Alauda arvensis* and Corn Bunting *E. calaudra* have received much attention in recent years but, worrying though their situation may be, none is as alarming as that of one of our most spectacular breeding birds, the Capercaillie *Tetrao urogallus*. The species was re-established in Scotland in the 1830s, but the population fell by 50% to as few as 1,100 birds during the 1990s. The Capercaillie's extinction in Britain is once again a real possibility.

The main reason for this dramatic decline is poor breeding success, probably related to climate change, but exacerbated by habitat destruction, changes in habitat quality (e.g. through overgrazing by Red Deer *Cervus elaphus*), predation and mortality through collisions with fences. Finding ways to mitigate these effects has been a top priority for conservationists, and David Baines and his colleagues from the Game Conservancy Trust have recently presented some important results which contribute to this aim.

To investigate whether breeding success was related to habitat structure or predation they selected 14 forests believed to have reasonable extant populations. The location of suitable study areas was hampered by the low numbers of birds remaining and, in many of the study years, few of these forests held even the authors' initial minimum requirement of ten females. The chosen forests ranged from open canopy native pine *Pinus*, mature pine plantation with some open canopy, through to mixed-species

plantations with mainly closed canopy. Data on breeding success were estimated annually at 7-14 of the forests between 1991 and 2001. Forest habitat structure and predator abundance were assessed in all forests in 1995.

Breeding success differed greatly from forest to forest and there was a positive relationship with the amount of Bilberry *Vaccinium myrtillus* in the ground layer, at least up to 15-20% cover. In addition to providing good cover, Bilberry leaves and berries and the good populations of invertebrates they support form a large part of the chicks' diet. No simple relationships were found between breeding success and the abundance of single species of predators, but lower success was related to an index which included both crow *Corvus* and Red Fox *Vulpes vulpes* abundance. Interestingly, although Pine Martens *Martes martes* are known to take eggs, there was no evidence that Capercaillie breeding success was related to their abundance.

These findings suggest that managing key forest areas to establish 15-20% cover of Bilberry would make a major contribution towards achieving the improvements in breeding success which are necessary to halt and reverse the decline of the Capercaillie. They also indicate that legal control of crows and foxes has a contribution to make, particularly given the parlous state of the current population. These measures need to be complemented by those designed to reduce adult mortality, such as removal of forest fences.

Baines, D., Moss, R., & Dugan, D. 2004. Capercaillie breeding success in relation to forest habitat and predator abundance. *J. Appl. Ecol.* 41: 59-71.

Shorter season leads to fewer breeding attempts by Turtle Doves

The Turtle Dove *Streptopelia turtur* is typical of many species living on intensive farmland in the UK, having declined in abundance by 69% between 1968 and 1998, and in range by 25%. This population decline is not confined to the UK: European declines have led to this species being classified as having an 'Unfavourable Conservation Status' on the Continent.

Stephen Browne and Nicholas Aebischer studied the breeding ecology of Turtle Doves at two sites in East Anglia between 1998 and 2000. One mixed and one intensive arable farm were chosen to determine whether the population decline could be attributed to differences in farming systems. There proved to be no significant differences in Turtle Dove breeding ecology between the two farming systems, however, thus allowing all data to be pooled for analysis. The only previous UK study on this species was carried out in the 1960s by Murton (1968), who also analysed all BTO Nest Record Card data for Turtle Dove nests found between 1940 and 1966. This made it possible to compare breeding ecology before agricultural intensification with that in the modern-day farming environment.

Several differences in breeding ecology were found between the two studies. The breeding season for Turtle Doves has become shorter with only 5% of nests being initiated in August now compared with 27% in the 1960s, supporting suggestions that Turtle Doves leave the UK earlier than they did 40 years ago. Individual nest success appears higher and preda-

tion rates lower nowadays, though there is a marked reduction in the *number* of nesting attempts by birds in intensive farm habitats, a trend which has been observed for another declining farmland species, the Song Thrush *Turdus philomelos*. Overall, Browne & Aebischer found that the number of fledged young per pair per year had more than halved since agricultural intensification. Furthermore, it is hypothesised that this reduction in the number of nesting attempts, and therefore the number of fledged young produced, could account for the decline in the population of the Turtle Dove in the UK.

Autecological studies such as this one are the basis on which conservation prescriptions are developed. A table of possible prescriptions for the recovery of the Turtle Dove population is presented and linked to prescriptions currently available through agri-environment schemes, such as hedgerow restoration, creation of scrub, provision of weed-rich areas or supplementary food. Establishing this link between research carried out on the ground and the application of effective measures on the ground is essential if there is to be any possibility of reversing the decline of the Turtle Dove.

Browne, S. J., & Aebischer, N. J. 2004. Temporal changes in the breeding ecology of European Turtle Doves *Streptopelia turtur* in Britain, and implications for conservation. *Ibis* 146: 114-124.
Murton, R. K. 1968. Breeding, migration and survival of Turtle Doves. *Brit. Birds* 61: 193-212.

Looking back

Seventy-five years ago:

'TURTLE-DOVE BREEDING IN W. MERIONETH. SINCE publishing my *Vert. Fauna N. Wales*, I have obtained evidence that – as I then foretold – the Turtle-Dove (*Streptopelia t. turtur*) is gradually extending its range westwards. Still, all records up to 1928 referred only to passing birds, generally single. Now, however, I am able to record an actual instance

of its breeding on the west coast. Captain Nanney Wynn reports that a pair nested and reared young in 1928 at Brynchrug, near Towyn. Although the Turtle-Dove has bred around Bala for many years past, and is well established along the north coast as far west as Bangor, this is the first occasion of its nesting on the west coast of Merioneth. H. E. FORREST.' (*Brit. Birds* 22: 328, April 1929)

Notes

Little Grebes feeding in association with scuba divers

On 8th February 2003, while conducting Ocean Diver training at Horsea Island Lake, in the northeastern corner of Portsmouth Harbour, Hampshire, I noticed some interesting behaviour by two Little Grebes *Tachybaptus ruficollis*. These two birds were following scuba divers' floats around and were quite unconcerned if the divers surfaced close by; they would even approach within 15 m of groups of divers on the shore. Several of our divers observed the birds underwater and it is clear that they were catching fish and other creatures disturbed by the divers. As a surface marker buoy is required whilst diving at Horsea, I am not sure whether

the birds associated divers on the bottom with the buoy, or rising exhaust bubbles; I suspect it was a bit of both.

The lake is about 1 km long by 200 m wide, and is saline, being connected to the sea by lock gates, which retain the water at low tide. It was originally constructed as a torpedo range in the 1880s by POWs supervised by Royal Engineers, but the torpedoes rapidly outgrew it. The lake has a good population of Tompot Blennies *Parablennius gattorugine* and Shannies *Lipophrys pholis* as well as Butterfish *Pholis gunnelus* and Common Eels *Anguilla anguilla*.

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Moorhen interspecific brood parasitism

Dan Forman recorded the instance of a Moorhen *Gallinula chloropus* laying an egg in the nest of a Common Coot *Fulica atra* at Llanelli, South Wales, in 1999, as possibly the first documented case of Moorhen interspecific parasitism (*Brit. Birds* 96: 43-44). In *The Birds of Rostherne Mere*, Harrison & Rogers (1977) state that 'It is not unusual to find Moorhens' eggs in Coots' nests, but they have not been known to hatch.' I censused breeding Common Coots and Moorhens around Rostherne Mere, Cheshire, in seven years between 1976 and

1984. Both species nested in the narrow belt of fringing vegetation made up principally of Common Reed *Phragmites australis* and the trailing or fallen branches of Crack-willow *Salix fragilis* and Italian Poplar *Populus x canadensis* 'Serotina'; Moorhens also nested in the branches and low crotches of Alder *Alnus glutinosa*. The number of nesting Moorhens during this period was estimated to have ranged from 10 to 29 pairs, with a mean of 23, and the number of Common Coots from 25 to 41 pairs, with a mean of 31.

Single Moorhen eggs were found in Common Coot nests on 12 occasions over the seven breeding seasons. Only in the year when the Moorhen numbers dropped to 10 pairs were no Moorhen eggs found in Common Coot nests. In three seasons, there was a single recorded incidence of such interspecific parasitism, with two records in two seasons and five such records in the remaining season. Census visits were carried out weekly and the fate of individual eggs was, therefore, not followed closely, but I have no record of any of these Moorhen eggs hatching and no young Moorhens were ever seen in Common Coot broods.



108. Moorhen *Gallinula chloropus* egg in Common Coot *Fulica atra* clutch, Rostherne Mere, Cheshire, spring 1977.

Tom Wall

English Nature, 18 Kempton, Lydbury North, Shropshire SY7 0JG

Cannibalistic foraging by Common Coots

The note on Great Cormorants *Phalacrocorax carbo* feeding on carrion (*Brit. Birds* 96: 138) reminded me of the following. In January 1991, at Tabuk, in northwest Saudi Arabia, seepage from sewage settling lagoons irrigated the desert beyond, and clumps of reed *Phragmites* grew there in abundance. In winter, a visiting population of 100+ Common Coots *Fulica atra* foraged regularly in the marshy area, using the reeds for cover when danger threatened. This happened frequently, as Marsh Harrier *Circus aeruginosus* regularly, and Spotted Eagle *Aquila clanga* occasionally, preyed upon them. The

coots tended to react sluggishly when raptors appeared and sometimes their size and lack of agility caused them to fall victim to attack. It was not only the raptors which were sustained by such kills, however. When harrier or eagle was disturbed as they fed, and put to flight, several coots would typically rush in and gorge on the carcass until they in turn were driven off by the returning raptor.

The Common Coots in this area seemed to have become conditioned to such opportunities. I can find no mention of such behaviour in *BWP* or other literature.

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EDITORIAL COMMENT See also the note by Humphrey Crick (*Brit. Birds* 86: 625-626) which describes a Common Coot eating one of its own eggs.

Northern Lapwing in aberrant plumage

In October 2002, at Stretham Mere, Cambridgeshire, I discovered an extremely unusual Northern Lapwing *Vanellus vanellus* among a flock of normal lapwings. Large areas of those parts of the plumage which are normally dark were pale and creamy, so I assumed initially that it was a simple case of leucism. I noticed that the primaries were entirely dark, however, and the 'face' was almost completely black, suggesting some form of melanism. The bird also had an unusually long crest. Two poor digital photos, viewable on the Cambridge Bird Club website (www.cambridgebirdclub.org.uk) show the features quite clearly, and Owen Marks sketched the bird. Despite some research, I can find no trace of anything similar in the literature, and remain completely puzzled!

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Fig. 1. Aberrant Northern Lapwing *Vanellus vanellus*, Stretham Mere, Cambridgeshire, October 2002. (Owen Marks)

Record numbers of wintering Richard's Pipits in the Western Palearctic

Northern races of Richard's Pipit *Anthus novaeseelandiae* are long-distance migrants, wintering from Pakistan to Indo-China and south to Malaysia (Snow & Perrins 1997), but a characteristic of the southwest and central Siberian race *richardi* is the frequency with which birds turn up well to the west of the normal breeding and wintering range. In the western Mediterranean, Richard's Pipit is a scarce or rare passage migrant, but small numbers, typically single individuals or small parties, winter, regularly in some parts, including Portugal, southern Spain, the Balearics, southern France and Sicily (Cramp 1988; Simms 1992; Biondi *et al.* 1996; Snow & Perrins 1997). During the period 1824-2003 in Italy, a total of 222 records, involving 377 individuals, was distributed across 15 different Regions (Biondi *et al.* 1996; Biondi unpublished), of which three were in Sardinia (Grussu 2001). Richard's Pipits wintered for the first time in Italy during 1992/93, at Latium, Viterbo District (De Vita *et al.* 1995), while from 1995 the species was observed regularly in winter in eastern Sicily, then in Tuscany in 2000 and 2001, and Sardinia in 2001 and 2003.

On 16th February 2003, MB discovered three Richard's Pipits on the edge of the city of Cagliari, Sardinia. On 20th February, MG visited the site and found at least 6-8 individuals. In the following days, we searched the area intensively, and discovered a group of 21-25 Richard's Pipits. Numbers remained more or less constant until the second half of March, when the flock began to disperse. Only 2-4 individuals were found on 4th April, by which time rising temperatures combined with the lack of rainfall made the site dry and unsuitable.

During the following winter, MG visited the site on 20th January and 7th February 2004, and again established the presence of several wintering Richard's Pipits: 20 individuals were counted in January and at least 30-33 individuals on 7th February.

The Sardinian Richard's Pipits were always in flocks, and when feeding they frequented similar habitats to those preferred by Meadow A. *pratensis* and Water Pipits *A. spinoletta* and White Wagtails *Motacilla alba* (although the Richard's Pipits remained in isolated, single-species groups). They favoured an area of saltmarsh, about 2 ha in extent, bordered by highways and

Table 1. Large concentrations of wintering Richard's Pipits *Anthus novaeseelandiae* in the Western Palearctic, 1992-2004.

	locality	no. individuals (max)	month	year	source
Italy	Latium	9	December-February	1992/93	De Vita <i>et al.</i> 1995; Biondi <i>et al.</i> 1996
Italy	Latium	5	January	1995	Biondi unpubl.
Italy	Latium	7	December	1995	Biondi unpubl.
Morocco	Massa	15	January	1996	Bergier <i>et al.</i> 1997
France	Camargue	14	January	1998	Dubois & CHN 1998
Italy	Sicily	20	March	2000	Corso unpubl.
Italy	Sicily	20	December	2000	<i>Birding World</i> 13: 8-11
Spain	Albacete	22	December	2001	<i>Birding World</i> 15: 10
France	Camargue	8	December	2002	<i>Birding World</i> 15: 495
Italy	Sicily	15	December-January	2002/03	<i>Birding World</i> 15: 500; 16: 57
Spain	La Coruña	13	January	2003	<i>Birding World</i> 16: 12
Italy	Sardinia	25	February	2003	This study
Portugal	Milfontes	18	March	2003	<i>Birding World</i> 16: 105
Spain	Cabo Peñas	13	November	2003	<i>Birding World</i> 16: 460
France	Camargue	9	December	2003	<i>Birding World</i> 16: 492
Spain	Villafáfila	29	December	2003	<i>Birding World</i> 16: 492
Italy	Latium	4	December	2003	Biondi unpubl.
Italy	Sardinia	33	January-February	2004	This study
Italy	Latium	12	January	2004	Biondi unpubl.



Marcello Grussu

109. Saltmarsh, Cagliari, Italy, where a record wintering flock of Richard's Pipits *Anthus novaeseelandiae* was discovered in February 2003.

residential areas, and separated from the sea by a narrow (30- to 40-m) belt of bare ground (plate 109). They preferred a damp, partially inundated area rather than drier parts of the marsh, with (in late February 2003) water coverage of c. 70-80%, water depth up to 60-80 cm, and vegetation coverage of 60-70%; the dominant plant species in such areas were *Salicornia* spp., *Scirpus* spp. and Sharp Rush *Juncus acutus*.

We believe that the range and numbers of Richard's Pipits wintering in southern Europe in recent years may have been underestimated. During the 1990s, the species wintered regularly in southern France (Camargue: Le Grau-du-Roi and Bouches-du-Rhône); northern Spain (La Coruña); widely in southern Spain (Málaga, Almería, Albacete, Ebro Delta and Mallorca); southern Portugal (Milfontes and Castro Marin salt pans); and sometimes along the Atlantic coast of Morocco (Schollaert & Franchimont 1996; Bergier *et al.* 1997), as well as Italy (above). Sporadic wintering records have also been reported from Belgium, the Canaries, Corsica, Cyprus, Norway and the UK. Table 1 gives details of the more significant concentrations of Richard's Pipits wintering in the Western Palearctic since 1992.

As table 1 shows, the group of up to 33 individuals in Sardinia is the largest wintering flock of Richard's Pipits so far recorded in the Western Palearctic. The numbers recorded in

2002/03 and 2003/04 in the western Mediterranean suggest that these were exceptional winters for the species; but is Richard's Pipit nonetheless more regular in winter than is generally thought?

Acknowledgments

We are grateful for helpful comments by A. Corso and G. Elias, and to F. Mascia for help with fieldwork.

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Waxwings drinking sap from Sycamore

On 4th April 1996, I watched ten Waxwings *Bombycilla garrulus* drinking sap from a Sycamore *Acer pseudoplatanus* in a rural garden near Falköping, Västergötland, south Sweden. The friend who owned the garden was able to watch the flock drinking sap in the Sycamore for a period of at least a week, the birds feeding on apples at his bird table as an alternative. The sap was leaking from small holes in the trunk, apparently bored by a Great Spotted Woodpecker *Dendrocopos major*. I do not know whether the woodpecker also drank the sap. Rowan *Sorbus aucuparia* berries in the area, the preferred winter food of Waxwings in south Sweden, had already been eaten by unusually

large flocks of Fieldfares *Turdus pilaris* and Waxwings earlier in the winter, and this may be the reason why the flock had turned to the sap.

BWP lists only two records of Waxwings drinking sap, from Silver Birch *Betula pendula* and maple *Acer*, both records during the spring. Sap could, however, be an important food during spring migration, when berries are typically scarce in Fennoscandia. A search on the internet for other records of sap-drinking waxwings indicated that both Waxwings and Cedar Waxwings *B. cedrorum* are reputed to drink sap, at least in North America. If so, the behaviour is under-recorded in the handbooks.

Jonas F. Grahñ

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River Warblers with songs similar to that of Grasshopper Warbler

On 16th May 1998, I discovered a singing *Locustella* warbler near Falköping, Västergötland, south Sweden. Although I was unable to observe the bird, the song sounded very similar to the characteristic rapid monotonous reeling of Grasshopper Warbler *L. naevia*, which is a common species in the region. There were, however, a number of subtle differences within the song which lead me to doubt my initial identification. These included an element of the buzzing quality typical of River Warbler *L. fluviatilis* song, but it lacked the pulsating, rhythmic stridulation which characterises that species.

In this part of Sweden, River Warbler is a late migrant, rarely occurring before late May, so the presence of a singing male in mid May would be most unusual. Despite this, I remained suspicious of the identification and returned to the site a week later. On this occasion, I was able to study the warbler in greater detail and prolonged views revealed it to be a typical River Warbler, although the song still sounded remarkably like that of Grasshopper Warbler. Being intrigued by this anomaly, I returned again on 3rd June, when I attempted a playback trial with pre-recorded songs of both Grasshopper and River Warbler. Playback of Grasshopper Warbler song elicited a strong response on two separate occasions: the warbler flew towards the tape recorder, singing vigorously, then returned to its original songpost

after I stopped the recorded song. Surprisingly, the recording of River Warbler did not stimulate any visible response.

In an attempt to resolve the identification beyond all doubt, the bird was trapped on 20th June, using a mistnet and pre-recorded tape of Grasshopper Warbler song. Examination in the hand revealed a wing length of 76-77 mm, with P2 longer than P3 (primaries numbered ascendantly): both features which exclude Grasshopper Warbler. The plumage was also typical of River Warbler, with pale-tipped undertail-coverts, mottled breast and unstreaked upperparts.

The following year, I observed another River Warbler with an atypical song at a second locality near Falköping, from 14th June 1999 onwards. This bird appeared to be a perfectly typical River Warbler in all respects except that the introductory song strophes were apparently identical to those in the song, of Grasshopper Warbler. These introductory notes lasted for up to four seconds before merging into the ordinary, pulsating song of River Warbler. Interestingly, this individual responded strongly to the playback of songs of both Grasshopper and River Warblers.

BWP confirms that River Warbler can show apparent mimicry, but in this instance, the first bird behaved as if it was a Grasshopper Warbler. Evidence for interspecific territoriality is weak,

however (*BWP*), and I have no other evidence to suggest that River Warblers respond to the playback of Grasshopper Warbler song, although the sample size is small. Experiments by Becker (1990) confirmed that even birds with a simple song, such as *Locustella* warblers, still need to learn their song. Perhaps the

absence of other singing River Warblers during and after the nestling period may have resulted in the first bird learning an atypical song.

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Becker, P. H. 1990. Song of the Grasshopper Warbler *Locustella naevia* in acoustic isolation. *Vogelwarte* 35: 257-267.

Jonas F. Grahm

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Communal smoke-diving by Rooks

At about 15.30 hrs on 10th March 2003, at West Bagborough, Somerset, I saw a dense stream of acrid black smoke issuing from a cottage chimney: clearly the fire had been stoked recently! Almost immediately, Rooks *Corvus frugilegus* from a small, active rookery near the cottage began to fly and swoop repeatedly through the smoke near the chimney; in all, about 15 individuals were involved. After a few minutes, the smoke subsided and the Rooks dispersed, but about 15 minutes later the fire was evidently restoked and the Rooks soon returned to dive repeatedly through the smoke plume

until it had diminished once again. At the time, a brisk wind blew the smoke almost horizontally towards the rookery. The temperature was about 8°C, so the behaviour could not be ascribed to low temperatures.

In all probability, smoke-bathing is not uncommon for Rooks, but it must be unusual for communal smoke-diving such as this to occur. I wondered whether the Rooks were treating themselves for an infestation of feather parasites, or simply indulging in some daredevil flying!

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Looking back

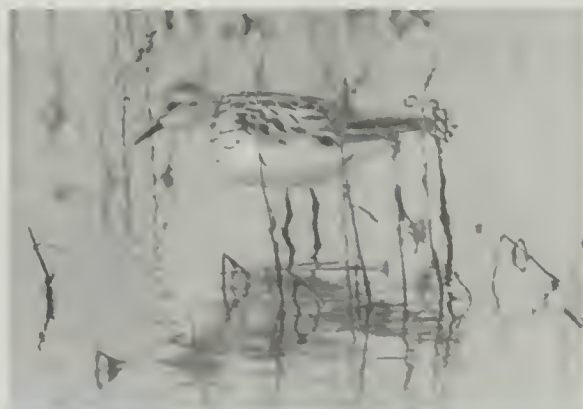
Fifty years ago:

'Semi-palmated Sandpiper in Norfolk.—On July 19th, 1953, an unusual wader was observed on Arnold's Marsh, Cley, Norfolk, by P. R. Clarke, who pointed it out to P. D. Kirky, and R. A. Richardson. It was subsequently watched for some hours at a few yards range by these three observers, myself, Mrs. R. F. Meiklejohn, and W. F. Bishop, the official watcher of Cley Marsh. We all came to the conclusion that it was a Semi-palmated Sandpiper (*Calidris pusilla*)....

'Every endeavour was made to catch the bird, which was quite tame, and to identify its footprints, but the mud was too liquid for this to be done. A small hide was erected by R. P. Bagnall-Oakeley and 100 feet of colour cine-film were obtained at very short range, together with several "stills" down to a distance of six feet, two of which are reproduced here (plates 27 and 28 [see right]). Copies of these were sent to Roger Tory Peterson, the well-known American ornithologist, who wrote to say that the bird was quite definitely a Semi-palmated Sandpiper. The colour film has since been seen by many people including other New World

ornithologists and all are agreed on the identification. This is apparently the third record for Europe, and the second for the British Isles. A. H. DAUKES.' (*Brit. Birds* 47: 131-132, April 1954)

[This was subsequently elevated to the first record for Britain, after one claimed to have been shot in Kent was discredited as one of the 'Hastings Rarities'. *Eds*]



110. Semipalmated Sandpiper *Calidris pusilla*, Cley, Norfolk, July 1953.

Reviews

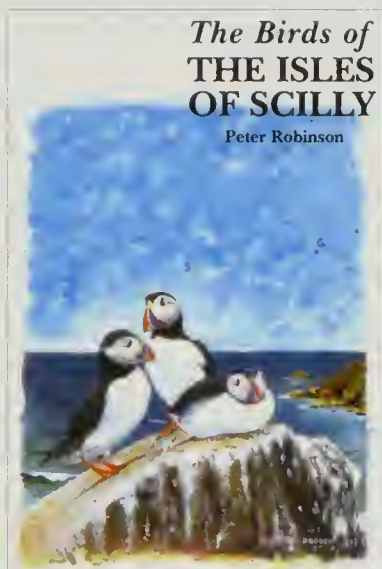
THE BIRDS OF THE ISLES OF SCILLY

By Peter Robinson.
Christopher Helm, A&C Black,
London, 2003. 608 pages;
60 colour plates; many black-
and-white illustrations and
figures. ISBN 0-7136-6037-6.
Hardback, £45.00.

This book is a thorough and up-to-date summary of the avifauna of the Isles of Scilly, one of the most important sites in the Western Palearctic for vagrant species, and one of those most frequently visited by birders, especially in October when well over 1,000 make the annual pilgrimage. The islands are also nationally important for their breeding birds, with some species, for example Song Thrush *Turdus philomelos*, breeding in far greater densities than on the mainland. Some seabirds, notably Roseate Tern *Sterna dougallii* and Puffin *Fratercula arctica*, have undergone dramatic declines, however, and the former has not nested successfully in the last ten years. Scilly is outstandingly beautiful, and it is a pity that this is not reflected in the paintings on the book's dust jacket. The picture of a group of typical autumn migrants to Scilly on the rear cover could be anywhere: it certainly isn't Scilly.

Introductory sections cover climate, vegetation, general ecology and land use, and provide a brief history of both birding and conservation on Scilly. The species accounts cover all the birds to have occurred on Scilly, some 426 species, in exhaustive detail. For the rarities, a complete breakdown of all records is included, together with clear and useful graphs to depict arrival dates in many cases. Each species has an introductory

caption summarising its status – whether it is a breeding bird or regular/scarse/rare migrant – while species that require a description by the Scilly Records Panel or BBRC are flagged. There are bar charts and graphs for many species, together with a selection of photographs illustrating both breeding birds and vagrants, plus a few landscapes and seascapes, although several of these have appeared in other publications.



The writing style is at times rather old-fashioned. For example, under Pechora Pipit *Anthus gustavi* we read that 'the Tresco individual was not captured and was not seen to be carrying a ring'; and such sentiments also probably reflect the author's interest in ringing. In some cases, statements about certain records still under consideration are little more than speculation. For example, under 'Wilson's Snipe' *Gallinago gallinago delicata*, two records still under review by BBRC and BOURC are listed, one for 1997 (which should in fact be 1987) and the other for 1998, the statement that both seem 'likely to gain acceptance... based partly on clear differences in drumming between this species

and [Common] Snipe' may be a little premature.

Similar anomalies occur elsewhere. Under Hen Harrier *Circus cyaneus*, the text states that 'a first-winter bird on St Agnes from 22nd October 1982 until 7th June 1983 was confirmed as *hudsonius*'. This is not the case, and it is to be regretted that the author has taken such a viewpoint. Perhaps, given the sheer wealth of information, it is inevitable that some accepted records are missing; for example, a Ring-billed Gull *Larus delawarensis* on St Agnes and St Mary's in mid April 2001 is excluded. Other mistakes are not infrequent: the 1981 St Agnes Magnolia Warbler *Dendroica magnolia* was a first-winter, not an adult male; and the 1995 Samson Arctic Redpoll *Carduelis hornemannii* was probably of the race *exilipes* and not nominate *hornemannii*. Such discrepancies as these can only serve to undermine the authenticity of other records in the book. Personally, I feel that only records which have been approved by the appropriate records committee should be included in such a work, and it seems bizarre to me that a claim of Pallas's Grasshopper Warbler *Locustella certhiola* on St Agnes in 1961 (not accepted) receives greater coverage than the only accepted record of Lanceolated Warbler *L. lanceolata* for Scilly, on Annet in September 2002.

Most Scilly regulars will probably buy this book, even though, at £45.00, it is not cheap. While it may seem churlish to criticise, one is left with the impression that, with a little fine-tuning, the ultimate Isles of Scilly avifauna could have been produced.

Doug Page

**NORSK RINGMERKINGS ATLAS
(NORWEGIAN BIRD RINGING ATLAS), VOLUME I**

By Vidar Bakken, Olav Runde and Even Tjørve. Stavanger Museum, Stavanger, 2003. 431 pages; maps, tables and figures.
ISBN 82-90054-62-9. Hardback, approx £38.00.

Computerisation has made the analysis of national ringing datasets feasible, and the arrival of a new millennium has probably given the impetus to realise the possibilities. The first volume of the *Norwegian Bird Ringing Atlas* (covering divers to auks, in Voous order) joins the BTO's *Migration Atlas* and the *Swedish Bird Ringing Atlas* in documenting the results from national bird-ringing schemes. Although the book is in Norwegian, all the introductory sections have versions in English, each species account has an English summary, and all the maps, diagrams and tables are annotated in English as well as Norwegian. As a result, a great deal of the information presented is readily accessible to English-speaking readers and, since the species accounts have a standardised layout, it is possible to glean some of the additional information with a bit of patience, even with no knowledge of Norwegian. The book is extremely well produced and the species vignettes by Eugeny Koblik are particularly attractive.

The introductory sections include details of the history of ringing in Norway, a brief outline of bird migration in general terms, and a description of the material utilised and analyses undertaken. To the end of 1999, nearly five million birds had been ringed and the database used contained nearly 98,000 'recoveries', though a proportion of these were 'retraps'

(birds recaptured at the same site) and a total of nearly 63,000 recoveries were used to produce the species accounts.

Each species for which there is at least one recovery has its own species account, and these take up the bulk of the book. The accounts range from a single page for species with only one or two recoveries, to five or more pages where sufficient data exist to produce a series of maps relating to different age classes and seasons. In addition to the recovery maps, each account includes maps showing the breeding distribution and the ringing sites for recoveries (including Svalbard where appropriate). Figures show the numbers of birds ringed in five-year periods (apart from the earliest period, from 1914 to 1945), the relative importance of different causes of death for those birds found dead, and the age distribution of recoveries of birds ringed as nestlings or juveniles. A summary box gives the total numbers ringed and recovered, together with the mean/maximum distance travelled and time elapsed from ringing. The maps themselves show movements from the place of ringing and are colour-coded for season of finding. For some species, a map shows monthly mean positions for all recoveries. I was not entirely convinced of their usefulness and found it strange that, for example, Northern Lapwing *Vanellus vanellus* had two such maps while

Oystercatcher *Haematopus ostralegus* had none. It was, however, a pity that details of birds found in Norway which had been ringed elsewhere were not included.

I found this book a fascinating companion to the *Migration Atlas* as one can now find out, for example, where those Norwegian Oystercatchers which do not winter in Britain go. There are recoveries down the western coast of Europe as far as Portugal, but particularly in the Waddenzee; indeed, most Norwegian Oystercatchers are now thought to winter in the Dutch/German Waddenzee and in eastern England. In contrast, there is only one Norwegian Merlin *Falco columbarius* recovery in Britain (and the *Migration Atlas* speculates that this might have been a Shetland bird reorienting back to Britain). All other foreign-ringed Merlins found in Britain have come from Iceland. Most Norwegian Merlins migrate to southwest Europe, though a few from northern Norway migrate to central Europe and as far south as Italy. Only a very small proportion of Norwegian-ringed raptors reach Britain: clearly they do not like crossing the North Sea. Given that Norway is probably the source of many autumn migrants in northern Britain, I am now looking forward to Volume 2 to see how the passerine results compare with the British picture.

The book can be ordered from the publisher through *Norsk Naturbokhandel* for the price given above plus freight costs; e-mail naturbok@online.no

Tony Mainwood

FIELD GUIDE TO THE BIRDS OF THE WEST INDIES

By Herbert Raffaele, James Wiley, Orlando Garrido, Allan Keith and Janis Raffaele. Christopher Helm, A&C Black, London, 2003.
216 pages; 92 colour plates; 181 colour maps.
ISBN 0-7136-5419-8. Paperback, £16.99.

When it comes to field guides, we are spoilt for choice nowadays.

Back in the 1970s, when I began birding, we had to make do with a

handful of works covering Britain and Europe. Today, most parts of the world are covered with an up-to-date guide, with each new volume setting new standards in content and design.

Until 1998, when the original edition of this book appeared, birders visiting the West Indies had

to make do with a guide more than half a century old, written by the man who gave his name to the world's most famous spy: James Bond. Not surprisingly, the new volume was hailed as a major improvement, with really excellent illustrations and text. As with many comprehensive new guides, however, the main problem was size and weight: at more than 1 kg it was far too bulky to carry around in a pocket, and difficult to consult quickly and easily in the field. Nevertheless, I found it invaluable when I visited Jamaica in search of the island's 28 endemics, lugging it around everywhere I went. It helped me pin down all the target species but one: the elusive Crested Quail-Dove *Geotrygon versicolor*!

So how does this slimline edition compare? Well, at less than a third of the weight, it is certainly light enough to carry in a jacket pocket, and having the species descriptions opposite the plates does, as always, make for ease of use. Using a clever design, the editors have retained virtually all the illustrations, and have made the maps much clearer by incorporating colour. In the case of the region's many endemics – the species of most interest to visiting birders – the text indicates where the species may be found. To save space, the detailed and comprehensive original text has been pared down to around 50-100 words for most species, and, except in a few cases, this is more than enough to

identify the bird in the field. Where a species is well covered by another guide, or familiar to most birders – for example the New World warblers (Parulidae) – the text is even more minimal.

Overall, this is an excellent 'field guide' version, though I would have liked the introduction to have carried more information about the conservation of each island's birds, as in the original. And I would still recommend the larger volume, although you may prefer to leave it on your bookshelf at home for reference, and pack this one in your suitcase!

Stephen Moss

**FIELD GUIDE TO THE
BIRDS OF CHILE:
INCLUDING THE
ANTARCTIC PENINSULA,
THE FALKLAND ISLANDS
AND SOUTH GEORGIA**

By A. Jaramillo, P. Burke and
D. Beadle. Christopher Helm,
A&C Black, London 2003.

240 pages; 96 colour plates;
numerous distribution maps.

ISBN 0-7136-4688-8.

Paperback, £19.99.

I possess more field guides to the birds of Chile than to any other South American country. This is hardly surprising, as it is the only country on the 'Bird Continent' with a manageable avifauna; but is yet another one really merited?

Pocket-sized with no space wasted, the succinct text is packed with all the essential information required to identify any of Chile's birds. Even those tricky cinclodes *Cinclodes*, canasteros *Asthenes*, ground tyrants *Muscisaxicola* and yellow finches *Sicalis* should not now present any problems. Usually only four to six species are covered on a page (sometimes fewer, rarely seven), with the illustrations on a facing plate. Thus all species are well covered without the book ever

seeming to be crowded. Similar and confusing species are shown together, even if this involves a little manipulation of the taxonomic order, making the whole approach very user-friendly.

The maps, while accurate, are depicted in an inelegant manner. The justification for splitting the country into three sections is made in the introduction, but I cannot believe it was really necessary. For many species, the text is long enough to incorporate a single map. As more than one scale is already used, changes of scale could also have helped to resolve this problem. The information imparted by the maps might also have been better considered; for example, what is really gained by depicting the sea as pink in the case of Arctic Tern *Sterna paradisaea*?

The illustrations are very good throughout and their appearance is enhanced by the uncluttered layout of the plates. They manage to depict, where necessary, all major variations in plumage, be they of age, sex or race. In most cases, these alone should enable the observer to arrive at the correct identification, no mean feat in itself. My only concern is that the coloured backgrounds used in a few of the plates do not work. The

woodpeckers (Picidae) and kingfishers (Alcedinidae) appear as if seen at dusk (not in the bright light I associate with days in Chile) and the ground doves *Columbina* disappear into the paper. It is also hard to see where the Black-throated Huet-huet *Pteroptochos tarnii* starts and ends.

This book also includes the Antarctic Peninsula, the Falkland Islands and South Georgia: 'Chile is the starting point for many Antarctic cruises, making it seem logical to include these areas in the book'. With probably more bird-watchers visiting the country en route to Antarctica than just to the country itself, a commercial justification to include these areas is not shameful. What *is* shameful, having included these areas, is to treat them rather glibly. What is the status of Black-necked Swan *Cygnus melancoryphus* or Correndera Pipit *Anthus correndera* in the Falkland Islands? Both are common residents but no mention of that can be found in this book. While birds endemic to the Falkland Islands or South Georgia are treated reasonably, those occurring both in Chile and on these islands should have been dealt with more carefully. Furthermore, when bobbing about on a boat off Cape

Horn, I would be less than thrilled to find that the prions I am attempting to identify are separated by 176 pages. Compared with the rest of the book, these areas appear to have been covered in a rather last-minute manner.

Looking now at some of the other field guides to Chile, there was definitely a need for a good guide with a modern approach. The general excellence of this book does indeed merit yet another, and it will be indispensable to anyone

fortunate enough to visit this fascinating and scenically stunning country.

Richard Schofield

**OF PARTRIDGES AND
PEACOCKS: AND OF
THINGS ABOUT WHICH
I KNEW NOTHING**

By David Jenkins, TLA
Publications, PO Box 62,
Aboyne, Aberdeenshire AB34
5YF, UK, 2003. 359 pages;
66 black-and-white
photographs; several drawings.
ISBN 0-9546277-0-9.
Paperback, £21.00.

**PENGUINS AND
MANDARINS: MEMORIES
OF NATURAL AND
UNNATURAL HISTORY**

By Martin Holdgate, The
Memoir Club, Whitworth Hall,
Spennymoor, County Durham,
2003. 372 pages; 40 black-and-
white photographs.
ISBN 1-84104-079-7.
Hardback, £19.95.

In the mid twentieth century, C. P. Snow had great success with a series of novels which described the emergence in Britain of two nations: ordinary folk, who can say and do as they please; and the academics and administrators unable to do this. Civil servants are gagged by the Official Secrets Act until weeded documents appear in the Public Records Office 30 years later, or they write their (usually vetted but sometimes explosive) memoirs after retiring. These two examples surely deserve study, both by old folk interested in what happened in the past and young ones anxious to know what they may be up against in the future.

After Cambridge in the 1950s, a thesis on the Grey Partridges *Perdix*

perdix of J. Arther Rank's Hampshire estate, and a grouse research unit in Northeast Scotland, David Jenkins became Deputy Director (Research) for the Scottish Nature Conservancy, and then Director of the Institute for Terrestrial Ecology's Banchory research station, with responsibility for overseeing all their research on vertebrate ecology. Meanwhile, he also went into orbit, travelling round the world, dining out on gamebirds, assisting in the development of the World Pheasant Association, and advising on research on lions in India and Africa, pheasants in the Himalayas, and peacocks and junglefowl in Indonesia among other things. After being given the bum's rush from a couple of Highland glens, in retirement he also managed to advise Lord Iveagh on the better management of Alfred Newton's old home, the Elvedon estate in East Anglia. He describes it all well, at excessive length, with much emphasis on the deficiencies of oriental toilet facilities, yet lists little but names in the index.

Sir Martin Holdgate studied experimental zoology instead of watching birds at Cambridge, and stayed on to investigate insect waterproofing. He spent ten years on expeditions to the southern hemisphere, and these are described well and contain occasional comments on birds. On marrying, he settled down to a meteoric career in the Civil Service, leaping from ladder to ladder gaining several rungs each time, via Deputy Director of the Nature Conservancy, the Central Unit for Environmental Pollution, and the Department of the Environment. Eventually, when he emerged as a 'tweeny' (a maid-of-all-work some-

where in between a Permanent and a Deputy Secretary) with retirement looming, he made the last and greatest leap to Director-General of the International Union for the Conservation of Nature in Switzerland, before finally retiring to take up such activities as sorting out the Zoological Society of London: a remarkable record.

I am not usually prone to praise civil servants, but these two did much good work in their time, and tell interesting stories. They also shed important light on the development of Nicholsonian nature conservation. At the present time, both its official and voluntary clones tend to be seen from below as ignorant control freaks, while they in their turn tend to look down on their critics (including large landowners) as obstructive peasants. Thus, for example, when animal liberators burnt down David Jenkins' research station some time after he left it, destroying important records of woodland birds as well as data on gamebirds, then came knocking to ensure he had noticed, he dismisses them as 'silly' instead of recognising important social critics who now also keep many other research centres in a permanent state of siege. Why did they choose to inflict several million pounds' worth of damage: was it because wild animals were kept in captivity, or sometimes collected or marked, or was it considered that the station supported 'field sports'? It is time that our two nations learnt to understand each other better, and got together again.

Bill Bourne

**WILDLIFE WALKS: GREAT DAYS OUT AT OVER 500
OF THE UK'S TOP NATURE RESERVES**

Edited by Malcolm Tait. Think Publishing in association with
The Wildlife Trusts, London 2003. 448 pages; colour photographs,
illustrations and maps. ISBN 0-9541363-1-4. Paperback, £9.99.

Being a fan of The Wildlife Trusts, I was pleased to be asked to review this book. Sadly, as I journeyed through it, I became disappointed. Taking the title first, I hope I am not being pedantic, but no walks are actually shown. What you have is information on visiting 200 Wildlife Trust sites, including maps for 112 sites, and a few lines of text for 300 more. Other organisations' reserves are not mentioned, so the subtitle is also misleading. The maps could have been better, since no scale or orientation is given and it is often hard to differentiate roads from footpaths. The little wildlife vignettes which clutter the maps are poor.

To illustrate how inaccurate

some information can be, I take two examples of places I know well: Grafham Water, in Cambridgeshire, and Cley, in Norfolk. For Grafham, the book says that leaflets are available from the 'fishing lodge and information centre', yet neither is shown on the map. For a 30-minute visit, a walk to Dudney Hide is suggested, but this is not marked, nor could you do it in such a short time unless you ran. There is no mention that the car parks are fee-paying; Gadwall *Anas strepera* and Shoveler *A. clypeata* are given as examples of diving ducks, and one of the illustrations is of a summer-plumage Red-throated Diver *Gavia stellata* nestling in the reeds at the

reservoir's edge.

On the Cley map, only one car park is shown, the beach hide is missing and a footpath is misplaced. More seriously, the scrapes and pools for which the reserve is famous are not shown. The text states that Cley supports a substantial proportion of the UK's Eurasian Bittern *Botaurus stellaris* population, yet only occasionally does a pair breed or attempt to do so.

On the plus side, the book is well laid out. The text for the main sites is clear and presented under a variety of subheadings, for example what it's best for, opening times, facilities, parking and local attractions.

I suggest you look at a copy before you buy it and, ideally, compare it with the other local and national site guides which are available.

Richard Porter

**BTO/CJ GARDEN
BIRDWATCH BOOK**

By Mike Toms. BTO, Thetford,
2003. 128 pages; maps, figures;
over 150 colour photographs.
ISBN 1-902576-73-X.
Paperback, £9.99.

The BTO's Garden BirdWatch scheme was started in 1995, and this book presents the results of the survey, as well as inviting readers to join, and collect and submit their own observations. This book is well written and attractively designed, printed and illustrated; it has a foreword by the Chairman of CJ WildBird Foods, who maintains that we can help no fewer than 80 bird species by intelligent feeding through the year. With increasing urbanisation and habitat loss, it is clear that gardens are very important in enabling birds to survive the winter and to be sufficiently

well-nourished to migrate, or breed, the following spring. Of course, CJ WildBird Foods supplies bird feed, so it is understandable that the company has supported the BTO in publishing this book, as well as helping to maintain Garden BirdWatch.

It is pointed out that research has shown Goldfinches *Carduelis carduelis* and Yellowhammers *Emberiza citrinella* made good use of garden feeding when farmland populations had declined. Garden feeding must play its part in maintaining biodiversity, although it must be remembered that many birds have specialised habitat and feeding requirements. Even so, I have known both European Nightjars *Caprimulgus europaeus* and Woodcocks *Scolopax rusticola* to surprise gardeners by their visits!

I found helpful sections on wildlife-friendly gardening, insect-attracting plants, pond-making,

bird foods, feeding methods and hygiene (so often neglected). Under garden bird ecology, topics include the function of song, preening and migration, and little-known and up-to-date facts are often given. The book contains over 50 accounts of garden-associated bird species, each with a surprising amount of information. Each species has a colour photograph; these are of variable quality, although a few are excellent.

Will the book succeed in encouraging those with access to a garden to feed and document birds throughout the year? Yes, I think that it will. Readers will certainly enjoy Mike Toms' concise and relevant prose, and most will surely be delighted that the book is dedicated to the memory of Chris Mead, a great garden bird enthusiast.

Philip Radford

THE FIFE BIRD ATLAS

Edited by Norman Elkins,
Jim Reid, Allan Brown,
Derek Robertson and
Anne-Marie Smout.
Fife Ornithological Atlas
Group, 2003.

364 pages; 2 colour
photographs, numerous
illustrations and distribution
maps. ISBN 0-9539324-2-7.
Hardback, £25.00.

The publication of the two BTO breeding atlases inspired many counties and regions to survey their own areas and produce local atlases, usually based on the tetrad as the recording unit. Nonetheless, this new atlas, covering the Scottish county of Fife, is notable as there has been only one previous year-round atlas, that covering North-east Scotland and published in 1990. Accordingly, all birders interested in distribution and status will want to see this book. At £25.00 for a 364-page, A4-sized hardback book it is certainly excellent value.

Fife is a small county (just 386 tetrads) on the east coast of Scotland, and most of the area lies below 200 m. *The Fife Bird Atlas* covers the years 1991-99, a rather long survey period for such a small county. In these nine years, 119 breeding species were found. The avifauna during this period totalled 279 species but 66 of these were recorded fewer than ten times and have not been considered further. There are few breeding specialities but the East Neuk of Fife is confirmed as being an important area for Corn Bunting *Emberiza calandra* (76 tetrads and at least 100 pairs in 2000). The most widespread species is the Blackbird *Turdus merula*, and, at 60,000 pairs, this is also reckoned to be the most numerous. The long coastline, including Fife Ness and the Isle of May, which are renowned for their migrant interest, contributes to the wide range of non-breeding species. There are 2,000 pairs of breeding Common Eiders *Somateria mollissima* with 15,000 win-

tering, and other regular seaduck include 3,500 Common Scoters *Melanitta nigra*, 1,000 Velvet Scoters *M. fusca* and up to six Surf Scoters *M. perspicillata*.

The breeding survey was tetrad-based and so is comparable with similar projects. The year-round survey, however, used 5-km squares as the recording unit, which is a compromise between the finer detail of the tetrad and the coarser 10-km unit, and was presumably chosen to simplify fieldwork effort. I would have preferred to see tetrads used throughout, to allow more direct comparisons and provide finer detail in the non-breeding season. Nonetheless, it is fascinating to see where species were found outside the breeding season, although the maps do show that many are either ubiquitous or localised in Fife, just as one might expect given habitat requirements.

Introductory chapters cover topics such as habitats, weather and methodology, but also provide a useful review of passerine migration in east Fife during the survey period. The format of the main part of the book (the species accounts) generally follows the usual style of two pages per breeding species, with illustration and text facing a map, or maps. Non-breeding species are treated differently, with usually one full page including one or two maps. Often there are additional maps to illustrate seasonal distributions, which adds value. I liked the way the texts appear to follow a simple format with the main points discussed in the same sequence. This is helpful to the reader and gives the book a consistent feel. The species distributions shown by the maps are also described in the text, something that many atlases fail to do. The relationship between occurrence and habitat is, however, not always apparent, and locations mentioned are given grid references in the appendices only, not in the texts, so that readers less familiar with Fife cannot readily see how they relate to the rest of

the map. The maps are plain, with red squares used on the breeding maps and black ones on the all-year or seasonal maps. There is no indication of relief, rivers or towns on the maps, so it is harder for the reader to interpret them fully. Most of the graphs either show WeBS (Wetland Bird Survey) data or have been taken from other works, and it seems that little statistical interpretation of distribution against habitat criteria has been attempted. An opportunity to analyse a huge database of information has therefore been missed, but perhaps that will be attempted at a future date. For breeding species, tables provide totals of occupied tetrads by category (confirmed, probable or possible), but the figures have not been summed. These are small points, but most should have been easy to include and would have allowed the reader to gain more information from the survey. I found only one error, in Appendix 1, where the total for Long-tailed Duck *Clangula hyemalis* should refer to winter numbers, not breeding pairs.

The team are to be commended for establishing population estimates for both breeding and winter seasons. These, together with the detailed distributions now available for Fife, are immensely valuable and instructive, and will be warmly welcomed by conservationists and planners working in the area.

Despite the long survey period, publication of the data has been achieved within four years. The resulting book demonstrates how important it is to assemble a committed team of surveyors and writers to see such a project through. It has undoubtedly been worth the wait. I was surprised that the print run is only 500, and I suspect that *The Fife Bird Atlas* will be a highly sought-after book and will soon sell out. If you find atlases fascinating, I recommend you order a copy immediately.

Mark Holling

**SAVING ASIA'S
THREATENED BIRDS:
A GUIDE FOR
GOVERNMENT AND
CIVIL SOCIETY**

BirdLife International,
Cambridge, 2003.

256 pages; numerous colour
photographs; distribution and
regional maps.

ISBN 0-946888-47-7.

Paperback, £19.00.

Do not be put off by the title. This thoroughly researched summary of the imminent threats facing many of Asia's birds and their habitats comes in an attractive, digestible and user-friendly format which immediately encourages further investigation. Do that and you will realise what a treasure-trove of facts and information you have discovered. Few will appreciate that 17 Asian species have not been recorded for 25 years or more, and are now presumed extinct. A further 16 species, including Jerdon's Courser *Rhinoptilus bitorquatus*, the recently rediscovered Chinese Crested Tern *Sterna berustei*, Gurney's Pitta *Pitta gurneyi*, three species of Gyps vulture which inhabit the Indian subcontinent, and several island endemics from Indonesia are considered to be critically endangered and facing imminent extinction. But far from being a compendium of hopeless causes, or an epitaph to lost species, this is, first and fore-

most, a book about ideas. It presents specialists, conservationists and those interested in Asia's environment with a plethora of issues and concerns facing the most over-populated continent on this planet, and recommendations by which these can be addressed.

Based upon the authoritative *Threatened Birds of Asia: The BirdLife International Red Data Book* (see *Brit. Birds* 96: 267-268), this guide makes use of much of the same data in a concise and accessible format. Unlike that publication, however, here the focus is upon habitats and the threats they face. A total of 33 threatened habitats is discussed in detail. Within each account, a regional map illustrates the areas where substantial or regionally important areas of habitat remain. Each regional map also shows the location of Outstanding Important Bird Areas, while the text and tables summarise the current status of the habitat, and threats facing individual species. Given the nature and magnitude of these threats, it is not surprising that conservation issues and strategic solutions form a major part of each habitat section. It is here that threats are brought into focus and gaps in our knowledge realised. If we are aware of these gaps, even casual observations made during short birding visits to the region can take on particular significance, but only if they reach the public domain.

As threats to the long-term survival of so many of Asia's birds

show few indications of relenting, it becomes increasingly important that those attempting to conserve the region's biodiversity devise co-ordinated action campaigns that extend beyond national and political boundaries. The long-term effects of unsustainable exploitation are brought together here within a regional context. This highlights the need for co-ordinated national and regional policies, as the efforts of some countries could be largely negated if their neighbours adopt conflicting policies. Only by co-ordinating efforts throughout the region can the labours of enlightened governments, NGO's and conservation charities be used to maximum effect. Conservation measures and the role that conservationists can adopt to influence regional decisions are also proposed. This approach also highlights the compound impact that individual countries may be making upon the long-term survival prospects for threatened species within the region.

This guide has been sensibly priced, making it accessible to most. It is lavishly illustrated throughout with colour photographs of many of Asia's most threatened, yet alluring, species, making it a valuable resource to anyone with an interest in the region. For those who know the region well, it makes compulsive reading.

Peter Kennerley

News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

Hen Harriers given police protection

The Association of Chief Police Officers (ACPO) has launched a high-profile public campaign to protect the Hen Harrier *Circus cyaneus*. This is the first-ever national campaign to raise public awareness of a specific wildlife crime – an acknowledgment that the Hen Harrier faces extinction as a breeding species in England and Wales because of illegal persecution. Richard Brunstrom, Chief Constable of North Wales, launched 'Operation Artemis' at a wildlife crime conference on 24th February.

Research by the Game Conservancy Trust suggests that there is sufficient moorland habitat to support around 230 pairs of Hen Harriers in England, but there were just 22 breeding attempts in 2003, of which only eight were successful. In Scotland, there were between 365 and 506 breeding

pairs in 2003, and a further 18 pairs nested in Wales. ACPO believes that there are different illegal activities affecting Hen Harriers in England and Wales. In England (and Scotland), it is suspected that a minority of grouse managers destroy eggs, shoot and poison the birds, while an equally small number of land managers indirectly affect the viability of the Hen Harrier population in Wales with illegal burning of heather moorland to increase the land available for grazing in upland areas.

To tackle this problem across upland Britain, police officers will visit grouse managers and land managers to remind them of the Wildlife and Countryside Act (which includes the maximum penalty of a £5,000 fine and six months' imprisonment for each protected bird that is killed) and to

hand out information packs which outline the aims of Operation Artemis and present details of the supplementary feeding programme for Hen Harriers devised by the JNCC. If grouse managers put out carrion near harrier nests, this will deter the birds from killing grouse chicks to feed their young. Stephen Redpath and Simon Thirgood have calculated that 800 pairs of Hen Harriers could co-exist with driven grouse shoots if the harriers were given supplementary feed during the breeding season.

To further raise public awareness of these marvellous birds of prey and the persecution they face, ACPO has launched an excellent website with live webcam pictures of a Hen Harrier nest.

Link: Operation Artemis
(www.savethehenharrier.com).

RSPB threatens legal action against windfarms

The RSPB has sent a shot across the Government's bows as the offshore 'windrush' intensifies. In a speech to the British Wind Energy Association on 4th March, the RSPB's director of conservation, Dr Mark Avery, suggested that costly and time-consuming legal battles were inevitable unless new offshore windfarms were kept away from coastal areas which support important bird populations. The RSPB has highlighted its opposition to three current windfarm applications: a 300-turbine farm on the Isle of Lewis in an area which supports high numbers of birds protected under European law, such as Golden Eagle *Aquila chrysaetos*; the Shell Flat scheme off Blackpool, Lancashire, because the area supports large numbers of wintering Common Scoters *Melanitta nigra* and other seaducks on the UK's 'Red List' of species of conservation concern; and developments in the outer Thames, which supports large numbers of wintering Red-throated Divers *Gavia stellata*.

The RSPB says that there could be many more windfarms which will be vulnerable to a legal challenge. The EU Birds Directive requires member states to draw up lists of all the Special Protection Areas where birds and their habitats are to be protected under European law. The directive is 25 years old but the UK Government has been slow to assess which parts of the British coastline could be ruled out for development, so companies are unclear which new schemes might be vulnerable. The Isle of Lewis project, for which Amec and British Energy are expected to apply for planning permission this summer, is in one of these areas.

Ports blunder yields new mudflats in Essex

Another example of the UK Government's refusal to recognise the importance of Special Protection Areas has now been resolved. The Department for the Environment, Food and Rural Affairs (Defra) is spending £5m to turn prime agricultural land on Wallasea Island in Essex back into mudflats and salt-marsh as a penance for breaking European law. The land, reclaimed centuries ago from the sea, will have its defences breached in four places so that the tide can flow over the north side of the island.

Two valuable wildlife sites, Lappel Bank, on the River Medway in Kent, and Fagbury Flats, on the Stour and Orwell estuaries in Suffolk, were controversially taken

continued on page 206

for port developments in the 1990s. The Lappel Bank became a celebrated case in 1993 when the Conservative Government excluded it from an SPA so that a port could be built. This was challenged by the RSPB in the courts, and, ultimately, the House of Lords referred the case to the European court of justice. The court ruled that member states were not authorised to take economic requirements into account when designating SPAs, and in 1997 the

Lords ruled that the Government had acted unlawfully – but the port on the Medway mudflats had already been built. The same ruling applied to the development at Fagbury. The Government promised that it would ‘replace’ both sites, and has been looking for suitable land ever since.

The Lappel Bank mudflats had covered an area of 22 ha, while Fagbury Flats had covered 32 ha. They have been replaced by a 110-ha area. The sea defences of Wal-

lasea are under pressure anyway, because of a combination of sea-level rise caused by global warming and the land sinking as England tilts southeast, rebounding from the last ice age. The habitat for birds is being gradually eroded. Stephen Aycliffe, English Nature’s conservation officer for Essex, said: ‘This area is larger than the land lost but it is sorely needed to replace the feeding areas that are disappearing.’

Farmland bird populations stabilise

New regional indicators of bird populations published by Defra paint a more positive picture than previous reports. Multi-species indicators, covering the period from 1994 to 2002, were derived mainly from the BTO/JNCC/RSPB Breeding Bird Survey. These indicators show relatively little change in the overall status of farmland birds, although there are regional differences, particularly within England, such as an overall increase in the northeast and decline in the southeast. This picture of relative stability contrasts sharply with the well-documented declines in many farmland species during the two decades from the mid 1970s.

As for woodland bird species, increases were noted in Scotland and in several English regions – the northeast, northwest, Yorkshire & the Humber, the East and West Midlands – during the period 1994 to 2002, and the data suggest that woodland bird populations in the northern parts of the UK had fared well in comparison with moderate declines in southern parts of the country.

David Noble, of the BTO’s Census Unit, cautioned that comparisons between regions must be undertaken with care, because different regions have their own typical species. He also emphasised that many of the broadly stable trends seen during the past eight years were preceded by several decades of declines, among both farmland and woodland specialists. The full report, including separate trends for farmland, woodland and all species in each country and region, is on the Defra website: www.defra.gov.uk/environment/statistics/wildlife/research/rwbi/index.htm

Socotra guardian appointed

Nadim Taleb, who recently obtained his MSc in Applied Ecology and Conservation at the University of East Anglia, has now returned to his native Yemen, and Socotra, to take the lead role in managing the Socotra Conservation and Development Programme (funded by the UN Development Programme). He has been involved with Socotra biodiversity projects since 1998 and was responsible for the surveys which led to the establishment of the island’s Zoning Plan for conservation. During the Darwin Initiative programme of 1999–2002, he received training from BirdLife in bird identification, conservation and census techniques. It was during this period that he discovered the world’s first nesting site of Jouanin’s Petrel *Bulweria fallax*, in 2001. Now back on Socotra, Nadim’s role will be the day-to-day management of the entire conservation programme on this ‘Middle Eastern Galapagos’.

(Contributed by Richard Porter)

Gravel extraction threatens seabirds

A new danger is threatening wildlife in the seas of northern Europe. Huge machines are sucking up over three million cubic metres of sand and gravel every year from German waters in the North and Baltic Seas – destroying valuable habitats, nutrients and nurseries of fish species far outside the excavation areas. A new excavation site has been proposed to the west of the island of Sylt, with the extraction of a further one million cubic metres of gravel by the year 2051. As a result of the removal of sand and gravel, the seabed will be reduced by a depth of 2.6 m. Environmental organisations fear that the seabed will not recover from such exploitation and that the marine ecosystem will suffer badly. Sand and gravel are desirable raw materials for coastal defences and for the building industry, especially now that easier sources from mainland reserves are coming to an end. This disruption to the seabed could have a dramatic effect on marine life such as sandeels (*Ammodytidae*), which are an important food source for many species of seabirds.

The new extraction area is currently a proposed protected area and has already been identified as an Important Bird Area (IBA) – the Eastern German Bight. Large numbers of birds winter in the area, including around 190,000 Common Scoters *Melanitta nigra*, and the site is also close to a Harbour Porpoise *Phocoena phocoena* breeding ground.

Grey Partridge foster parents sought

The male Grey Partridge *Perdix perdix* is an exemplary father. He is faithful, helpful with the children, and vigilant about the safety of his family to the point of being killed by predators; what's more, his nurturing instinct could help to ensure the future survival of this threatened species. Grey Partridges not only make excellent parents but, unlike many other species, will happily adopt orphaned chicks and treat them as their own, something which scientists from the Game Conservancy Trust (GCT) hope to exploit in order to carry out an ambitious two-year experimental reintroduction programme.

Large chunks of the British countryside no longer hold Grey Partridges and this project aims to identify the best way of restoring the species in areas where it has become extinct or its population is at a low ebb. In 1900, it was estimated that there were over a million pairs of Grey Partridges in the UK; present numbers are estimated at just 77,000 pairs. The scale of this decline justified the bird becoming a Biodiversity Action Plan species, with the GCT being the lead partner for the plan (the Government's target is for 150,000 pairs by 2010).

Attempts at reintroducing a species once it has disappeared can be fraught with difficulties, and a major problem with fostering chicks onto barren pairs is the need to have wild adult partridges present at the release site. In areas where wild Grey Partridges are now absent, it is clearly impossible to do this. The project will, therefore, also develop appropriate techniques for releasing adults into the wild.

The Game Conservancy Trust is keen to hear from conservation-minded farmers or landowners in East Anglia or Hampshire/Wiltshire/Dorset who would like to participate in the reintroduction experiment. For further details, please contact Mrs Claude Gillie, tel: 01425 652381 or e-mail: cgillie@gct.org.uk

Trans-European transport routes bulldoze birds

In early March, the European Parliament voted on 30 new Trans-European Networks for Transport (TEN-T) projects that will cost a staggering total of €220 billion (£154 billion). Another depressing statistic is that the new routes threaten 20 key sites for endangered species across Europe. With ten new member states joining on 1st May, the EU is gearing up for unprecedented economic expansion, including the extension of the TEN-T – a system of roads, railways and waterways. The new proposals come as the EU celebrates 25 years of the Birds Directive, which governs the protection of wild birds that the TEN-T is putting at risk.

The RSPB is particularly concerned for nine globally threatened species, including the Dalmatian Pelican *Pelecanus crispus*, Great Bustard *Otis tarda* and Aquatic Warbler *Acrocephalus paludicola*. Conservationists also suspect that the TEN-T is infringing the EU's Birds and Habitats Directive and the Water Framework Directive. The most damaging schemes include one to remove bottlenecks on the Rhine-Main-Danube route, which will irreversibly damage important wetlands and globally threatened wildlife along the Danube in several countries from Germany to Romania; plans for a new bridge over the Strait of Messina to link Sicily to mainland Italy, into which thousands of migratory birds could crash; and a railway and road across the Greek-Bulgarian border which will damage the Kresna Gorge, a unique wildlife site already safeguarded by Bulgarian national law and which will supposedly be protected by European law when Bulgaria joins the EU in 2007.

20 million swallows...

The first British Barn Swallow *Hirundo rustica* of the spring was seen on 7th February at Dunster, near Minehead, in Somerset. Even more remarkable, a flock of four Barn Swallows was seen over the River Danube in Hungary, north of Budapest, on 9th February. If their survival in freezing February was questionable, the survival of Barn Swallows across Europe has been enhanced by a pioneering educational project in Italy. This is a website which links up schools along migration routes from Europe to Africa, encouraging children to cherish 'their' swallows. Twinning between a school in Lucrezia, Italy, and Ebbaken, Nigeria, has included sponsored visits to Africa. The first visit to Ebbaken, in November 2002, recorded a Barn Swallow roost containing an estimated 20 million birds! The last time swallows were systematically hunted at Ebbaken was the winter of 1995/96, when a British/German/Italian team counted 200,000 Barn Swallows killed. From then, until 2001, local people decided voluntarily to give up hunting and eating swallows, thanks to the efforts of the local Swallow Project. You can visit *Un Volo tra due Continenti* (A flight linking two continents) at: www.swallowsschool.it/ingl/home.html

3,000 swifts...

Or at least 3,000 references to the Common Swift *Apus apus* in the painstaking online bibliography compiled by Ulrich Tigges, APUSlist. Among the many fascinating facts on Ulrich's website is the longevity record for a Common Swift, a bird ringed as a chick at its nest in Switzerland, and recorded there again 21 years later. During that time it could have flown as much as 4.8 million km. He also tells us that the Common Swift speed record is 220 kph (137 mph). Visitors to the website can also sign up for the virtual magazine, APUSlife.

Link: www.swift.utigges.il.eu.org/records_english.html

Caspian Gulls from Ukraine

The first two ringing recoveries of 'Caspian Gull' *Larus (c.) cachinnans* in the UK have recently been confirmed by the BTO. The first was a bird seen at Beddington Sewage Farm in Surrey on 12th January 2002, which had been ringed at Cherkassy, central Ukraine, as a nestling on 1st June 1999 (and which was seen subsequently in both Germany and Belgium). The second ringed bird was seen at Southwold, Suffolk, by BBRC member Brian Small on 20th January 2004, and was also ringed as a nestling at Cherkassy. Anyone finding a ringed bird (or seeing one well enough to read the ring number!) can report it at <http://www.bto.org/ringing/ringinfo/founding.htm>

Getting the shot?

'The wintering Dusky Warbler *Phylloscopus fuscatus* at Clennon Valley, Paignton, Devon, has attracted a good number of visiting birdwatchers since its arrival in November. Having found this bird on my local patch, I enjoyed showing it to many visiting birders. From late January, the warbler found an ideal area in which to feed, a small, scrub-filled ditch running into a fast-flowing stream. This provided shelter and plenty of insects, supplemented with a few mealworms which I put out on the coldest of mornings.



III. Dusky Warbler *Phylloscopus fuscatus*, Paignton, Devon, January 2004.

'All was well on the morning of 8th February, but when I returned to the site on 13th February I was appalled to find that the main area of cover which the bird used to feed in had been trashed, undoubtedly by 'birders'. The front and overhanging shrubbery in the ditch had been removed and piled up a couple of feet back from the edge; the area was now exposed and open, providing little in the way of cover,

and this had drastically altered the microclimate so suitable to both insects and the Dusky. The rest of the ditch remained untouched – it was only the favoured feeding area of the Dusky Warbler which had been vandalised.

'Having made numerous enquiries with local birders, it seems clear that this was done by someone wanting to video or photograph the bird so badly that nothing else mattered – not even the habitat or future welfare of the bird. Non-camera-wielding birders would not have needed to carry out such an act as the bird did show well, and clearing the area would have certainly frightened it off for a considerable time.

'Digiscoping has brought bird photography to the masses; nevertheless, the great majority of bird photographers are careful and responsible people, and it is the idiot minority responsible for wanton vandalism such as this who give everyone a bad name.'

(Contributed by Mike Langman)

Yet another winter atlas

Following Alan Knox's claim of a first for Britain in 1990 with the North-East Scotland Bird Club year-round atlas (*Brit. Birds* 97: 153), there comes an earlier record of this taxon. Don Taylor has pointed out that the Kent Ornithological Society organised a Winter Bird Survey during 1977-80, the results of which were published in a 100-page publication of the same name, by Nick Tardivel, in March 1984. Are there any others out there? Or is the Kent record the one that I should forward to the BOURC?

Seawatching in Senegal

For seawatchers keen to spread their wings along the East Atlantic flyway just beyond the limits of the Western Palearctic, there is a new website about seawatching in Senegal. Swedish seabird enthusiast Niklas Holmström (co-author of *Flight Identification of European Seabirds*) has devised the website which promises unforgettable seawatching off the Cap Vert peninsula. Niklas believes that the numbers and variety of seabirds passing the location in autumn make it one of the best for land-based seawatching along the entire eastern Atlantic seaboard. The website has sections on travel information, the likely species, pelagics and a photo gallery.

Links:

<http://senegal.seawatching.net> and

<http://theflight.seawatching.net>

Birds in Wales

There is also plenty of newly available information about birds in Wales. The Welsh Ornithological Society has a new website, the 2002 *Welsh Bird Report* has just been published (96 pages, summarising all the occurrences in Wales for that year, plus a ringing report and notes on the breeding Whimbrel *Numenius phaeopus* and the wintering Redhead *Aythya americana*) and then there's the book, *Birds in Wales 1992-2000*, published in March 2002, summarising all species in Wales and including population estimates, ringing report and details of the main environmental changes. Both the book (270 pp., price £14.95 inc. postage) and the annual report (price £5.00 inc. postage) are available from Jon Green, WOS, Crud yr Awel, Bowls Road, Blaenporth, Cardigan, SA43 2AR.

Link: WOS

(www.welshornithologicalsociety.org.uk).

Obituary

W. D. (Bill) Park (1922-2003)

The name of Bill Park will not be known to many birdwatchers today, for Bill, who died on 20th September 2003, aged 81, was one of that dwindling band who began birding before the Second World War. In 1938, he joined the London Natural History Society. After service as a bomber pilot during the war, particularly in the Middle East and Italy, he declined an invitation to become James Callaghan's political agent in 1945, followed his father into the Board of Trade, and began to devote much of his spare time to the LNHS during that first post-war surge of amateur interest in ornithology.

During the 1950s and early 1960s, he was successively ringing secretary, secretary and then chairman of the LNHS's Ornithological Section (with over 1,000 members), and served on the Society's governing Council. He was also one of two cameramen who, over a period of four years, filmed some 70 species for the Society's 16-mm colour feature film 'London's Birds', which had its premiere in 1963. He served as secretary of the Toxic Chemicals Committee of the BTO and as a member of the joint RSPB/BTO committee covering the same field, and was a founder member of Dungeness Bird Observatory.

In 1961, he moved to the Nature Conservancy Council (NCC), where Max Nicholson was then director, and where life moved at a much faster pace than in the Board of Trade. For the next 20 years, Bill was in the thick of battles for the protection of, or limitation of damage to, the environment when threatened by oil pollution, pesticides, toxic waste dumping, airport expansion and the Channel Tunnel. As co-ordinator of the NCC's advice to ministers, he brought his administrative skills, quiet powers of persuasion, unflappability and inimitable sense of humour into full play during the protracted gestation and passage through Parliament of the Wildlife & Countryside Bill. It has been said that the NCC's success in achieving many favourable changes, including the provision for establishing marine nature reserves, was in no small part due to his efforts.

Bill had a dry wit and used it generously, which made him such good company in the field and in the committee room. He was always concerned with the welfare of his staff, and keen that anyone leaving should have a proper send-off. He felt deeply that talent and achievement should be recognised, and he lobbied hard and successfully for an RSPB hide to be named after Stanley Cramp as a well-deserved memorial.

Bill retired from the NCC in 1982. He ran a small antiques business, was chairman of the Surrey branch of the Council for the Protection of Rural England, and passed his love of birds on to two of his grandchildren. Much of his retirement was sadly clouded by the long illness and subsequent death of his wife Elizabeth, whom he had married in 1946, and, latterly, by his own declining health.

Raymond Cordero



112. Bill Park, early 1960s (from family collection).

Announcement

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least one of your birding friends to take out a subscription? (Start with the ones who are always borrowing *your* copy!)

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Eds

Correction

Marsh Harriers in the UK – correction to breeding totals

The figures for the number of Marsh Harriers *Circus aeruginosus* breeding in the UK, published in the annual report of the Rare Breeding Birds Panel for 2001 (Ogilvie *et al.* 2003), considerably under-reported the numbers of pairs and young reared in Norfolk. New data, made available after the report was published, suggest that at least 189 young fledged from at least 106 nests in Norfolk, compared with our published figures of 53 young from 29 pairs. Since this affects the national figure substantially, the corrected figures are presented here. For the UK as

a whole, this means that 235-271 pairs bred in 2001, rearing at least 482 young. This constitutes the best year on record for Marsh Harrier since the Panel began gathering data. The numbers of young reared and breeding females reported to us since 1992 are shown in fig. 1 below.

Reference

Ogilvie, M., and the Rare Breeding Birds Panel. 2003. Rare breeding birds in the United Kingdom in 2001. *Brit. Birds* 96: 476-519.

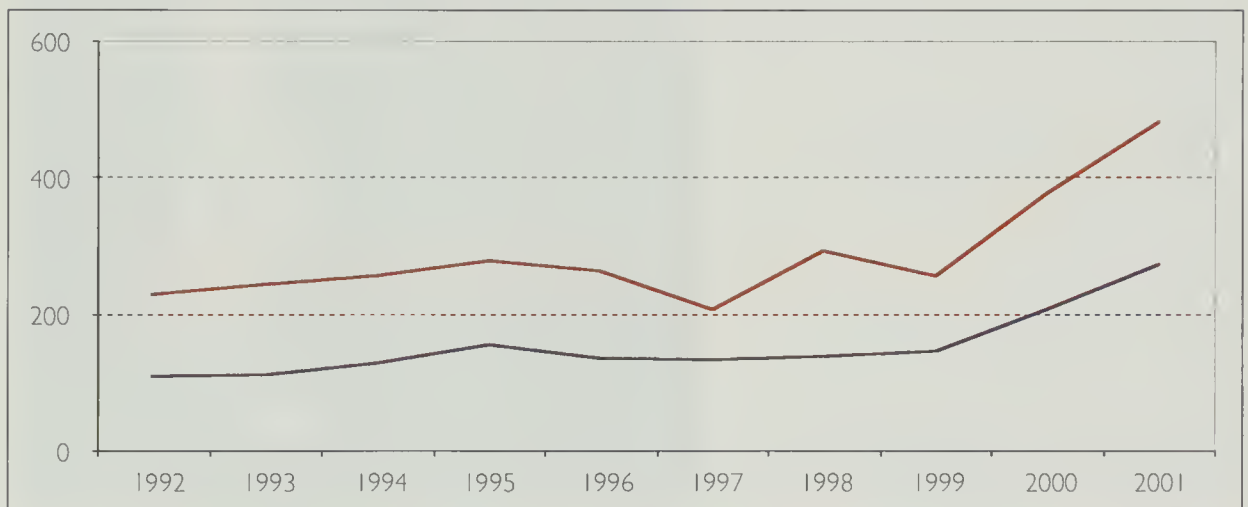


Fig. 1. The number of breeding female Marsh Harriers *Circus aeruginosus* (blue) and the number of young reared (red) in the UK, 1992-2001.

Dr M. A. Ogilvie, Glencairn, Bruichladdich, Isle of Islay PA49 7UN

Rarities Committee news

Assessment of 'African Chaffinch' claims in Britain

BBRC has recently completed detailed assessments of several claims of Common Chaffinches *Fringilla coelebs* of the African forms *africana/spodiogenys*. So far, claims of six different individuals have been assessed, including a well-publicised bird in Essex in 1994 (see *Birding World* 7: 132, 134).

All of the birds assessed so far have shown features which are strongly reminiscent of male 'African Chaffinches' and have appeared markedly different from European races of Common Chaffinch (*F. c. coelebs*, etc.). For example, the claimed birds have shared a tendency to show green or greenish (rather than rich warm brown) mantle tones, pale pink underparts and an extensive blue-grey hood (rather than a blue-grey crown and nape contrasting with rich pink cheeks). Nonetheless, despite such striking superficial similarities to North African birds, several other features have conspired to make the claimed birds differ significantly from typical North African Common Chaffinches.

In fact, there seem to be some common threads running through the claims which amount to a pattern of recurring anomalies. Some particular atypical traits found in the claimed birds include: a tendency to show an extensive grey wash on the breast (not found in African birds); unusually pale and colourless underparts, or underparts on which the pink col-

oration is either too orange for typical *africana/spodiogenys* or is unusually restricted; pink tones on the ear-coverts or malar area (where *africana/spodiogenys* is normally uniformly blue-grey); and rather dull green or brownish-green mantle tones (typically cleaner, brighter green in *africana/spodiogenys*).

Extensive studies of skins at the British Museum of Natural History, Tring, by Alan Knox (for BOURC) and Brian Small (for BBRC) have confirmed that no specimens of *africana/spodiogenys* there match the appearance of the various British claims in certain key particulars. At the request of Alan Knox, Christian Erard examined specimens held in Paris and confirmed that none there showed the extensive grey breast-markings of the Essex bird in 1994 and some subsequent claims. Consequently, none of the birds assessed so far have been accepted as 'African Chaffinch'.

Nonetheless, the striking appearance of these birds must be acknowledged, as must the fact that in several respects, including some features not mentioned above, they do actually look much closer to North African than European birds. A paper is in preparation which will discuss the identification and assessment of these interesting birds in more detail, and consider possible reasons for their unusual appearance. With this in mind, we are keen to receive any previously unpublished or unsub-

mitted images of African-like Common Chaffinches in Britain for reference and possible inclusion in the paper. We would also be grateful for high-quality images of African Chaffinches taken in North Africa. Anyone providing such images will be acknowledged fully, and any photographs published will be paid for at the usual *BB* rates. Please send any material to the Editorial address (details inside front cover or on the *BB* website: www.britishbirds.co.uk). Informed comment on the possible causes of plumage aberrations which would cause birds to resemble North African forms is also welcomed.

The claims of African Chaffinches assessed so far include:

Fingringhoe, Essex

9th-25th April 1994, also present in January 1995

St Mary's, Scilly

12th April 1994

Penrith, Cumbria

12th February 1998

Kendall, Cumbria

1st-5th March 1998

Fair Isle, Shetland

15th April to 1st May 1998

Wigton, Cumbria

27th-28th April 1998

One further claim is awaiting assessment.



The British Birds Rarities Committee is sponsored by Carl Zeiss Ltd.

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Secretary: M. J. Rogers, 2 Churchtown Cottages, Towednack, St Ives, Cornwall TR26 3AZ



Monthly Marathon

Photo no. 204: Corn Bunting

Monthly Marathon photo number 204 (*Brit. Birds* 97: plate 26, repeated here as plate 113) captures a scene all too often encountered, whether birding at home or abroad: a view from the rear of a streaky, brownish passerine perched on a fence before it vanishes into thin air or dense cover.

The fact that it is heavily streaked and brownish narrows the field down to a small number of families, namely larks (*Alaudidae*), pipits (*Motacillidae*) and buntings (*Emberizidae*), but ones that many people find frustratingly difficult! Nonetheless, our mystery bird, even though it is facing away from us, is actually relatively straightforward to identify.

The bird appears to be mainly warm brownish with heavily marked mantle and nape, and largely dark wings with two well-defined whitish wing-bars. The tertials are blackish with broad pale fringes. What we can see of the underparts is whitish, with dark spotting along the flanks. The legs are pale pinkish. And that's about



Colin Bradshaw

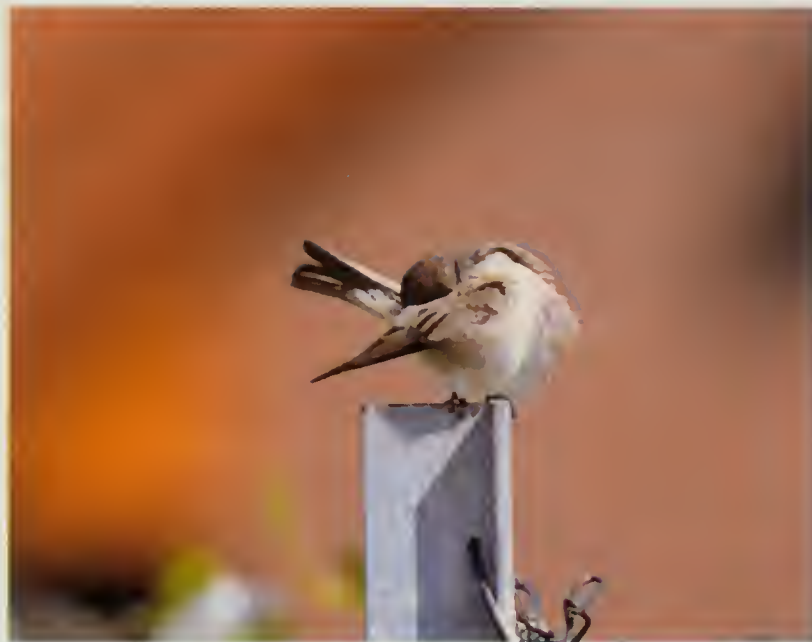
113. Corn Bunting *Emberiza calandra*, Cáceres, Spain, June 2003.

as helpful as it gets – or is it?

A close inspection of the underparts shows that well-defined dark spotting extends onto the rear flanks. This feature alone rules out all the larks and large pipits in the Western Palearctic, leaving us with smaller pipits and buntings. Those pale pink legs rule Water *Anthus spinoletta*, Rock *A. petrosus* and Buff-bellied Pipits *A. rubescens* out of the equation, while the lack of contrasting pale mantle braces rules out Pechora *A. gustavi* and

Red-throated Pipits *A. cervinus*. The latter feature also rules out Lapland *Calcarius lapponicus*, Yellow-breasted *Emberiza aureola* and Pallas's Reed Buntings *E. pallasi*. The upperparts are heavily marked with black, but are not as neatly streaked as would be shown by Tree *A. trivialis* and Meadow Pipits *A. pratensis*. Olive-backed Pipit *A. hodgsoni* can be eliminated by the fact that it would show a largely plain, olive-toned mantle; and Berthelot's Pipit *A. berthelotii* can be ruled out because it normally shows a plain, greyish-toned mantle.

This leaves us with the remaining buntings. The one thing which is notable about our mystery bird is that it is *so* unremarkable, with no single striking feature: something which, in itself, is not particularly helpful, but which does help dismiss all the species which show contrasting or colourful head patterns, which is a large percentage of the family. The tail is long and broad and shows no obvious white in the outermost tail feathers, which eliminates the remaining 'brown' species, including Pine *E. leucocephalos*, Yellowhammer *E. citrinella*, Cirl *E. cirlus*, Rustic *E. rustica*, Little *E. pusilla* and Reed Buntings *E. schoeniclus*. The head appears quite bulky, and the feet look large and clumsy; this latter feature



114. 'Monthly Marathon'. Photo no. 207. Fifth stage in thirteenth 'Marathon'. Identify the species. Read the rules (see page 54), then send in your answer on a postcard to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, or by e-mail to editor@britishbirds.co.uk, to arrive by 31st May 2004.

would be particularly obvious when this bird takes to the wing, because it is a Corn Bunting *E. calandra*. The habitat choice of a wire fence would seem to be a favourite of this species too! This Corn Bunting was photographed in June 2003 in west-central Spain, where the species is still abundant in some parts, in marked contrast to its status in the UK.

Stuart Elsom

Our readers appeared to find this round of the competition harder than perhaps Stuart did, because only seven entrants chose the right option! Most (but not all) contestants narrowed the field down to the Emberizidae, but from there a wide spread of choices encompassed almost all the species mentioned above. As a consequence, the leading pack in this round of the Marathon has shrunk dramatically from last month – although all seven who were right this

month had safely negotiated last month's Common Kestrels *Falco tinnunculus* as well.

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Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers mid February to mid March 2004.

Ferruginous Duck *Aythya nyroca* Lynford gravel-pits (Norfolk), 21st February to 1st March, possibly the long-stayer from other Norfolk localities; Worcester (Worcestershire), 26th February; Martin Mere (Lancashire), (intermittent) long-stayer to 7th March at least; Minsmere (Suffolk), long-stayer to 7th March at least.

Lesser Scaup *Aythya affinis* Coanwood Common Pond (Northumberland), two, 17th February; Milton Loch, two, 29th February, with one remaining to 7th March and one, presumably one of same, Lochrutton Loch, 1st and 6th March; Castle Loch, long-stayer to 19th February, presumed same at Caerlaverock, 16th-17th February (all these localities in Dumfries & Galloway). **Harlequin Duck** *Histrionicus histrionicus* Lewis (Western Isles), 17th-21st February



115. Female Ferruginous Duck *Aythya nyroca*, Martin Mere, Lancashire, February 2004.

Steve Young/Birdwatch

Hugh Harrop



116. Female King Eider *Somateria spectabilis* (nearest female), with Common Eiders *Somateria mollissima*, Bluemull Sound, Shetland, February 2004.

Mike Richardson



117. Female Harlequin Duck *Histrionicus histrionicus*, Lewis, Western Isles, March 2004.

(and possibly for up to a month before that), and again 5th-6th March. **White-billed Diver** *Gavia adamsii* Gruinard Bay (Highland), 20th February; South Nesting (Shetland), 7th March (long-stayer since February at least).

Cattle Egret *Bubulcus ibis* Otter Estuary (Devon), 24th February. **White-tailed Eagle** *Haliaeetus albicilla* Loch of Strathbeg (Northeast Scotland), 3rd-5th March. **American Coot** *Fulica americana* Castle Loch, 11th-17th Feb-

ruary; Loch of Clickimin (Shetland), long-stayer to 6th March at least; South Uist (Western Isles), long-stayer to 3rd March at least.

Laughing Gull *Larus atricilla* Rainton Meadows (Co. Durham), 17th February. **Bonaparte's Gull** *Larus philadelphia* Hayle estuary (Cornwall), 25th February. **Herring Gull** *Larus argentatus* of North American race *smithsonianus* Three separate first-winters were in Ireland in February,



Richard Chandler

118. Yellow-browed Warbler *Phylloscopus inornatus*, Corby, Northamptonshire, February 2004.



George Reszeter

119. Dusky Warbler *Phylloscopus fuscatus*, Royal Portbury Dock, Somerset, March 2004.

remaining into early March, at Nimmo's Pier (Co. Galway), Killybegs (Co. Donegal) and Culmore (Co. Derry). **Forster's Tern** *Sterna forsteri* Killyleagh (Co. Down), 21st February; Nimmo's Pier, 21st February; Kinvarra (Co. Clare), 4th March.

Oriental Turtle Dove *Streptopelia orientalis* St John's Loch, near Thurso, 23rd February, presumably same as the December 2003 record at Ham (both Highland). **American Robin** *Turdus migratorius* Grimsby (Lincolnshire), long-stayer to 8th March, when taken by a Eurasian Spar-

rowhawk *Accipiter nisus*. **Hume's Warbler** *Phylloscopus humei* Hook Head (Co. Wexford), 28th February (present from December 2003). **Dusky Warbler** *Phylloscopus fuscatus* Royal Portbury Dock (Somerset), 7th March; Paignton (Devon), long-stayer to 7th March at least. **Pine Bunting** *Emberiza leucocephalos* Choseley Barns (Norfolk), 28th February to 7th March at least.

[Thanks to Graham Catley for the news of 'Amy', the American Robin in Grimsby. Graham suggests that Amy, one of the undoubted highlights of the winter, was an ultimate film star

and must have been one of the most-photographed of all females in recent times. So it was perhaps not surprising that her last moments were captured on video – a film star to the end. A short memorial service, with a rendition of ‘Don’t cry for me, ardent twitcher’ will be held at Pyewipe.... News of a major rarity meeting an untimely end brings back

various memories, including those of at least two unfortunate Grey-cheeked Thrushes *Catharus minimus* during the influx on Scilly in 1986 (one was caught by a cat and another drowned in the sea). Adrian Pitches at the News & comment desk is keen to hear from you if you have a story on this subject worth telling...]

Rebecca Nason



Rebecca Nason

120 & 121. Male Pine Bunting *Emberiza leucocephalos*, Choseley Barns, Norfolk, March 2004.

Steve Young/Birdwatch



122. Little Bunting *Emberiza pusilla*, Anglesey, north Wales, February 2004.

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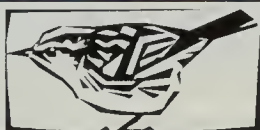
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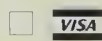
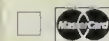
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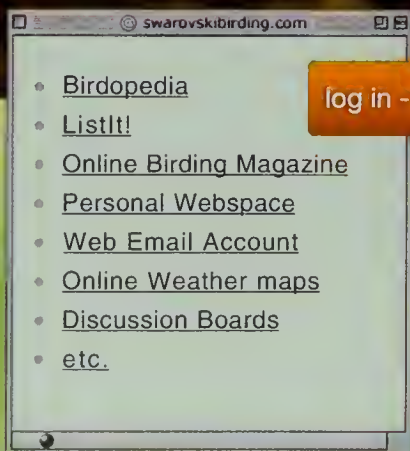
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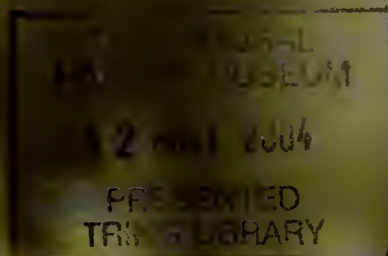
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Barn Swallows
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Red-billed
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Front-cover photograph: Female Red Grouse *Lagopus lagopus*, Derbyshire, April 2003.

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Barn Swallows and agriculture

Karl L. Evans and Robert A. Robinson



Rosemary Watts/Powell

ABSTRACT Much concern has been expressed recently regarding the population status of Barn Swallows *Hirundo rustica* in Europe. Analyses of long-term population datasets suggest that the UK Barn Swallow population has probably increased slightly in recent decades, but this overall picture masks regional variation. Long-term declines in eastern England may have occurred in response to the loss of preferred foraging habitat, i.e. grazed grassland. More local declines have occurred in other regions, probably in response to localised habitat changes and nest-site loss. Local, and perhaps also national, declines have taken place in other European countries as well. The loss of foraging habitats and nest-sites has been implicated in these trends. Although factors operating on the African wintering grounds may also have contributed to reduced population levels, evidence for this is limited.

Long-term monitoring schemes have revealed significant changes in the population and range sizes of many British birds. Species which occur on farmland have shown some of the most dramatic declines, and formerly abundant species such as Common Starling *Sturnus vulgaris* and House Sparrow *Passer domesticus* are now on the 'Red List' of

Birds of Conservation Concern, alongside much rarer species such as Capercaillie *Tetrao urogallus* and Cirl Bunting *Emberiza cirlus* (Gregory *et al.* 2002). This would have been considered highly unlikely 50 years ago.

In continental Europe, similar declines in bird populations have occurred and, at the level of individual countries, these are correlated

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123. Barn Swallow *Hirundo rustica*.

with the extent of agricultural intensification (Tucker & Heath 1994; Donald *et al.* 2001a). Autoecological studies have identified particular changes in farming practices which have probably caused certain species to decline (Aebischer *et al.* 2000), including Corn Crake *Crex crex* (mechanised and earlier mowing), Sky Lark *Alauda arvensis* (loss of mixed farming and spring cereals), and Cirl Bunting *Emberiza cirlus* (loss of stubble fields and extensive pasture). Research has demonstrated that agricultural intensification is a pre-eminent cause of population declines but also that measures can be undertaken to reverse these declines, at least for some species. Research has also raised public awareness and concern, which, together with pressure from conservation organisations, has strongly influenced the UK Government's decision to use an index of bird populations as a measure of the quality of life and to pledge to reverse declines in farmland birds by 2020 (Anon. 1999).

Applied farmland bird research initially focused on arable systems and their associated species, and results suggested that reduced food supply, primarily grain and weed seeds, was a major causal factor of population declines (Donald *et al.* 2001b; Robinson & Sutherland 2002). As adults, species such as Yellowhammer

E. citrinella and Corn Bunting *E. calaudra* have exclusively seed-based diets, but nestlings require an invertebrate-rich diet, and it was suggested that decreasing invertebrate abundance in farmland habitats was also important. A loss of invertebrates may lead to bird population declines either because fewer offspring can be raised or because adult mortality increases, both of which reflect a trade-off between reproductive investment and survival. There is good evidence that reduced availability of invertebrate chick food has contributed to population declines in the Grey Partridge *Perdix perdix* (Potts 1986), and mounting evidence that many species have lower breeding success as a consequence of agro-chemicals reducing, albeit often temporarily, invertebrate abundance (Brickle *et al.* 2000; Morris *et al.* 2002).

The Barn Swallow *Hirundo rustica* breeds widely throughout the Holarctic and Palearctic regions and is often colonial (Turner 1994). Over 100 pairs have been recorded nesting in the same building, though most colonies are much smaller and solitary pairs are not unusual. The species formerly bred in caves and possibly tree holes, but now most pairs nest in man-made structures. Stone buildings and those which house livestock appear to be favoured. The species is entirely insectivorous and all but the

most southerly of Palearctic breeding populations migrate southwards to spend the winter in sub-Saharan Africa. The species' behavioural ecology has been well studied (e.g. Møller 1994), its popularity as a study species reflecting a tolerance of disturbance at the nest and the ease with which nests can be found. Such traits, together with the Barn Swallow's insectivorous diet and anecdotal evidence for population declines, also render it a highly suitable species for study when investigating how agricultural intensification affects insectivorous farmland birds. Public empathy for the species, due in part to its association with summer, also generates the potential to use the Barn Swallow as a flagship species for farmland bird conservation. Recently, applied ecological research has been directed at describing Barn Swallow population trends and discovering the reasons for change. In this paper we summarise the results of this effort, focusing predominantly on the European breeding grounds, particularly the UK. We first summarise the evidence for population change and then discuss potential causes. Although we focus on the breeding grounds, we also assess whether changing conditions in the African winter quarters may influence population dynamics.



Fig 1. Spatial variation in Barn Swallow *Hirundo rustica* population density in the UK, derived from 2002 Breeding Bird Survey (BBS) data. Darker shades indicate areas where higher densities of Barn Swallows were recorded on BBS squares.

British status

Distribution

The Barn Swallow is one of Britain's most widely distributed species, with breeding recorded in over 90% of 10-km squares (Gibbons *et al.* 1993). Although common over much of the UK, only small numbers occur in the highlands and islands of Scotland, other upland areas, and in large cities. At a national scale its distribution changed little between the late 1960s and the late 1980s, although it gained a stronger foothold on some of the more remote Scottish islands during this period (Sharrock 1976; Gibbons *et al.* 1993).

More recent data on spatial variation in abundance are obtainable from the BTO/JNCC/RSPB Breeding Bird Survey (BBS). Counts, made in distance bands along line transects, from 2,200 sample squares, can be interpolated to produce indices of relative abundance across the country (Newson & Noble 2003). These confirm that Barn Swallows are still widely distributed across the UK, and that the overall pattern of abundance has not changed markedly since the late 1980s, though densities are currently rather low in parts of southeast England (fig. 1).

Population trends: results from the Breeding Bird Survey and Common Birds Census

On an historical timescale, Barn Swallow populations throughout Europe have probably increased dramatically since humans began to alter the landscape. Forest clearance would have increased the availability of the open habitats which swallows prefer for foraging, and buildings would have provided additional nest-sites.

The Common Birds Census (CBC) monitored British bird populations in farmland and woodland habitats from 1964 to 2000 (fig. 2; Marchant *et al.* 1990). The CBC index for Barn Swallow is quite variable, at least when compared with indices for other passerines of a similar size (Baillie *et al.* 2002). Such variability may obscure a long-term population trend, although there is no convincing evidence for a decline of the UK population as a whole since the mid 1960s. This overall pattern, however, conceals regional differences; populations in eastern England have declined markedly, whereas those in the west of Britain have tended to increase (Robinson *et al.* 2003). Furthermore, population indices tended to increase for mixed-farm plots, whereas populations did not

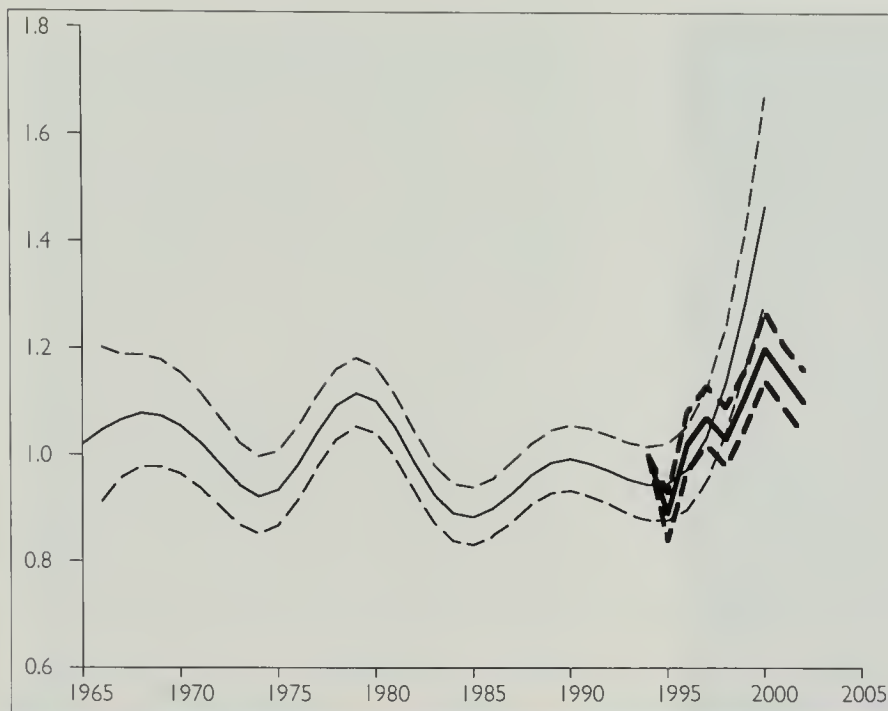


Fig. 2. Trends in UK Barn Swallow *Hirundo rustica* populations, from Common Birds Census plots (1965-2000, grey lines) and Breeding Bird Survey squares (1994-2002, bold black lines). Dashed lines indicate 95% confidence limits.

change significantly on farms which were predominantly either arable or pastoral.

Although the CBC produced highly detailed and valuable data on bird abundance, it suffered from two main drawbacks as a national population monitoring tool. First, survey sites were not located randomly and the scheme did not monitor upland populations well, although the results were representative of much of lowland England (Marchant *et al.* 1990). Second, survey effort was intensive, requiring ten visits each year, which limited the number of sites covered. In addition to these general drawbacks, other factors cast doubt on the CBC's ability to monitor the national Barn Swallow population accurately. Colonies in towns and villages were poorly covered, though analyses show that trends do not differ between sites with human habitation and those without (Robinson unpubl.). Furthermore, because Barn Swallows nest colonially, defending territories of just a few square metres around their nest (Møller 1994), the territory-based mapping technique of the CBC was not ideal for this species. Nevertheless, the trends from plots in which birds were recorded as present, compared with those on which actual nests were counted, do not differ (Robinson *et al.* 2003).

The BBS was introduced in 1994 to overcome these problems, with a survey design requiring just two visits to a randomly chosen

tended to decline (table 1). These patterns closely resemble those shown by the CBC indices over a longer time period.

Trends in local populations are also quite variable. Forty-seven CBC plots have been surveyed in at least 20 years since the inception of the scheme in 1964, and the indices for these show that swallow numbers declined significantly on 11 plots, increased significantly on eight, but that there was no significant change on the remaining 28 (Robinson unpubl.).

Other surveys

Eight English sites at which breeding Barn Swallow numbers had been recorded previously, mostly from the 1960s or 1970s, have recently been resurveyed (Evans *et al.* 2003c; table 2). Each site was relatively large, at least 8 km², and thus observed population changes were unlikely to reflect local redistribution of birds, as between-year fidelity to a local area is high. Population counts were achieved by surveying all potential nest-sites and counting the number of pairs directly, either through ringing studies or by counting the number of active nests, defined as those which were being prepared for egg-laying or contained eggs/chicks. Numbers increased at four sites, but decreased at the remaining four sites; there was some evidence that populations were increasing in the north and west but declining elsewhere.

1-km square per year (with an additional visit to record habitat details; Raven *et al.* 2003). This allows many more volunteers to participate, and over 2,000 squares are now surveyed each year. BBS data demonstrate that, between 1994 and 2002, Barn Swallow populations showed a statistically significant increase of 10% over the UK as a whole. The national pattern, however, hides much regional variation. Populations in the west of Britain have increased significantly, those in the north have shown no overall change, and those in the south and east have

European population trends

Declines in Barn Swallow populations have been reported across much of Europe (Tucker & Heath 1994). In general, the largest declines have been in northwest Europe, while populations in many eastern European countries appear to have remained stable, or are fluctuating with no overall trend. There is great uncertainty about the accuracy of information from many countries, however, since it is frequently based on expert opinion rather than derived from extensive, long-term monitoring schemes. There is also strong evidence for marked regional variation in population trends within some countries, particularly in northwest Europe. In the future, population and demographic data on swallows should be much improved as a consequence of the work of the EURING Barn Swallow project, initiated in 1997, the aims of which include monitoring the size and breeding performance of Barn Swallow

populations across Europe.

In Denmark, the national point-count survey shows a long-term decline in numbers and many localised surveys also reveal decreases, some of which are particularly marked (Thellessen 2000). In Switzerland, annual national surveys between 1983 and 1998 suggested that Barn Swallow populations declined by approximately 75% (Schmid *et al.* 2001), and although this trend is not statistically significant, intensive localised surveys show that significant declines occurred in areas such as Lake Constance and Zurich (Bauer & Heine 1992; Böhning-Gaese & Bauer 1996; Weggler & Widmer 2000). Local data from southern Finland suggest a decline of about 80% between 1936 and 1984 (Tiainen *et al.* 1985), although annual transect surveys between 1978 and 1995 suggest that the population is now stable, albeit with large fluctuations (Väisänen *et al.* 1998). Long-term declines have

Table 1. Regional variation in Barn Swallow *Hirundo rustica* population trends in the UK, 1994-2002, revealed by the Breeding Bird Survey. Figures marked with an asterisk are statistically significant ($P < 0.05$); data from Raven *et al.* (2003).

	% change	lower 95% confidence interval	upper 95% confidence interval
UK	+10.1*	+4.0	+16.0
Scotland	-5.1	-20.0	+13.0
Wales	+39.0*	+16.0	+66.0
Northern Ireland	+12.5	-18.0	+55.0
England	+9.0*	+3.0	+16.0
Northwest	+3.5	-11.0	+20.0
Northeast	+20.3	-6.0	+54.0
Yorkshire	+23.1	0	+52.0
East Midlands	-5.0	-23.0	+17.0
East	-25.6*	-36.0	-13.0
West Midlands	+8.9	-10.0	+32.0
Southeast	-9.9	-23.0	+5.0
Southwest	+41.9*	+24.0	+62.0

Table 2. Long-term Barn Swallow *Hirundo rustica* population trends at eight sites that were recensused between 1998 and 2000. Data from Evans *et al.* (2003c). 'Population' indicates estimated number of pairs.

site	county	baseline		resurvey		population index
		year	population	year	population	
South Brewham	Somerset	1967	25	1999	59	2.36
Healy	Northumbria	1968	30	2000	60	2.00
Sedberg	Cumbria	1964	133	1998	181	1.36
Stanford	Norfolk	1977	138	2000	171	1.24
Blithfield	Staffordshire	1964	74	1999	59	0.80
Didcot	Oxfordshire	1975	74	1999	27	0.36
Holbeach	Lincolnshire	1981	28	1999	5	0.18
Berney Arms	Norfolk	1964	64	1999	9	0.14

also been reported in the French Alps (Archaux 2002) and from German villages and rural areas (Jeromin 1999; Berthold 2003). We are aware of only one European study reporting a stable population, that along the lower River Dyje in the Czech Republic (Hubalek-Zdenek 1997), and no studies which report increasing populations, although this may partly reflect a publication bias towards studies reporting declines.

Agricultural intensification – a driver of population change?

In the UK, one of the most obvious effects of agricultural intensification has been the polarisation of arable and pastoral farming systems (Robinson & Sutherland 2002). Prior to the 1960s, most farms were obliged to employ a mixed system, as crop production required manure from livestock, while grain was partly used to feed livestock during the winter. The advent of synthetic fertilisers and pesticides enabled farmers in drier eastern regions to specialise in the production of more profitable arable crops. Conversely, farmers in upland and western regions of the UK, with soil types less suitable for cultivation, concentrated on rearing livestock. A major implication of such polarisation has been the loss of habitat heterogeneity, both within farms and at a larger scale, which has had detrimental effects on many bird species (Benton *et al.* 2003).

A wealth of evidence suggests that Barn Swallows benefit from livestock production. First, the species prefers to nest in buildings which contain livestock (Møller 1983). Second, foraging birds prefer grassland, particularly grazed grass, to arable land, probably as a consequence of the diverse and abundant aerial invertebrate fauna associated with grazed grass (Evans 2001; Ambrosini *et al.* 2002). Any agricultural developments that reduce the availability of grazed grass, such as housing cattle indoors for longer periods, may lead to local population declines. Third, the cessation of livestock farming at a farm scale has been shown to cause Barn Swallow populations to decline, largely as a consequence of lower recruitment of young birds into the breeding population, but also because of decreases in breeding success (Møller 2001). In eastern parts of the UK, it is likely that the loss of livestock farming and grazed grassland has caused Barn Swallow populations to decline. Higher densities in western and northern parts of the UK (Robinson *et al.*



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124. Traditional farm buildings, especially ones with livestock, are a particular favourite for nesting Barn Swallows *Hirundo rustica*. The piles of droppings under a nest-site in the roof (as shown here) can provide a good clue to what stage the nesting attempt is at.

2003) may, however, reflect a simultaneous increase in the acreage of pasture in these areas, which could have more than compensated for declines in the east, and generated the apparent overall increase in the total UK population. Although other factors are also relevant for explaining swallow population trends, changes in the extent of grazed grassland appears to be the single most important one and, looking at Europe as a whole, it is clear that dramatic changes are likely to occur in eastern Europe as a consequence of the expansion of the EU and subsequent promotion of western-style intensive agriculture.

Other aspects of intensification may also have influenced Barn Swallow populations. In poor weather, foraging Barn Swallows increase their use of vegetated field boundaries, owing to the increased availability of prey relative to field centres during such conditions (Evans *et al.*



125. Farm ponds provide easy access to mud for nest-building and are also an important source of food during inclement weather; their loss is one aspect of farm modernisation which has been detrimental to Barn Swallows *Hirundo rustica*.

2003a). Changes in farming practice have led to widespread loss of hedgerows and although this situation is slowly being improved, there are still significantly fewer hedgerows than in the past (Haines-Young *et al.* 2000). In addition, the location and type of hedgerows will have changed. Most new hedgerow planting is now along roads, and structural and floristic diversity are much lower here than in mature, established hedgerows, which in turn affects their insect communities. It appears likely that such habitat modification will have reduced the ability of farmland to sustain Barn Swallows during prolonged periods of adverse weather, perhaps particularly so in eastern England, where hedgerow loss has been most severe (Evans *et al.* 2003a). Similarly, farm ponds, which formerly provided high-quality foraging habitat, particularly during inclement weather, are now rare in the modern agricultural landscape.

There is growing evidence that farmland invertebrate populations are declining and that this is linked to intensification (Wilson *et al.* 1999; Benton *et al.* 2002). Although it is difficult to identify the particular aspects of intensification causing these declines, and no single factor

is likely to be solely responsible, important candidates include loss of marginal habitats and weedy plants, increased mowing and cutting of grass, and increased use of agricultural chemicals (Donald 1998; Wilson *et al.* 1999; Vickery *et al.* 2001).

Applications of agro-chemicals during the breeding season reduce invertebrate abundance and cause some birds to shift their feeding territories (Brickle *et al.* 2000; Morris 2002). Barn Swallows feed on aerial invertebrates, which have great dispersal powers and are thus likely to recolonise sprayed fields rapidly; swallows also prefer to forage over grazed fields (Ambrosini 2002), which receive fewer chemical applications than arable ones. This may explain why studies have failed to detect a negative short-term response to chemical applications in Barn Swallows, despite other species exhibiting such responses (Morris 2002). Increased use of agro-chemicals is likely, however, to contribute to a general reduction of invertebrates, which may reduce the ability of farmland to support breeding swallows. More specifically, the use of anti-worming agents such as ivermectin (often sold as Ivomec or Heartgard) in livestock can reduce the abundance of dung-feeding inverte-

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126 & 127. Barn Swallow *Hirundo rustica* nests. The rough texture of stone, particularly in combination with another anchorage point, provides swallows with ideal sites on which to build their nests.

brates, with consequent adverse effects on species such as Red-billed Chough *Pyrrhonorax pyrrhonorax* (McCracken 1993; Edwards *et al.* 2001). No studies have investigated whether anti-worming treatments reduce aerial invertebrate abundance but, at least in Oxfordshire, the majority of such treatments seem to be applied to livestock that are not milked, and which are kept in fields away from dairies and other farm buildings where swallows nest (KLE unpubl.). Barn Swallows typically forage within a few hundred metres of their nest (the mean distance being c. 200 m; Bryant & Turner 1982) and are thus unlikely to use fields containing treated livestock. The use of anti-worming agents is perhaps unlikely to have dramatically reduced food availability for breeding Barn

Swallows, but may have contributed to overall declines in invertebrate populations. It could also, arguably, affect productivity if pre-breeding adults and fledglings were foraging over larger areas.

In 2004, the BTO will run a survey of Barn Swallows in the UK, to obtain a national picture of habitat choice by foraging birds during the breeding season. The survey will gather data from between 2,000 and 4,000 randomly allocated points to determine patterns of habitat selection for birds foraging over arable and pastoral farmland. It should enable the factors influencing the current distribution of Barn Swallows and the direction and magnitude of localised population changes to be established more precisely.



Andy Harmer/Windrush

128. Barn Swallow *Hirundo rustica*.

Non-agricultural factors

Factors operating on the breeding grounds, but not directly related to agricultural intensification, may also influence Barn Swallow population trends. Nest-site loss is perhaps the most likely candidate. Robinson *et al.* (2003) found no relationship between regional CBC trends and an estimate of building redevelopment over a similar time period, but Evans *et al.* (2003c) found a strong correlation between the magnitude of population decline and nest-site loss within eight large English study sites. Studies in Switzerland and Germany have also demonstrated that the magnitude of Barn Swallow population decline is positively correlated with nest-site loss (Jeromin 1999; Weggler & Widmer 2000). The changing structure of villages, such as the demolition of outside toilets and the increasing tendency to secure sheds and other outbuildings, thus denying swallows access, may have contributed to population declines. The loss of farm buildings, as small farms are merged into larger units, may have further contributed to nest-site loss. This may be particularly important in southeast England, where the rate of redevelopment of old buildings has been greatest and Barn Swallow populations are declining the most.

Climatic change, particularly the trend towards warmer and drier summers, may also

have affected breeding opportunities for Barn Swallows, either because mud is less readily available for nest building and/or because drier conditions may reduce invertebrate abundance (Frampton *et al.* 2000). Although the lower swallow population densities in southeast Britain, which is generally drier than the rest of the country, offer some support for this hypothesis, we consider that climate change is unlikely to contribute significantly to Barn Swallow declines in the UK. Most of the spatial variation in swallow density in the UK appears to be unrelated to climatic conditions, and areas of Europe which are much more arid than south-east England support large and stable Barn Swallow populations.

Factors operating in non-breeding regions

European Barn Swallows occur widely throughout sub-Saharan Africa in winter. In southern Africa, birds from many European regions (central and eastern Europe, the UK and Scandinavia) have been recorded wintering together; in central and eastern Africa, populations appear to be more segregated, with those breeding in western Europe having more westerly wintering locations (reviewed in Evans *et al.* 2003b). Most Barn Swallow mortality occurs during the winter, and is apparently independent of breeding population size (Møller 1989).



Karl Evans

129. The continued intensification of grassland management, such as increased silage production to feed cattle which are housed indoors, could have disadvantageous consequences for Barn Swallows *Hirundo rustica*.



Karl Evans

130. Grazing by cattle delivers many benefits to Barn Swallows *Hirundo rustica*, not least by increasing prey abundance and diversity.

Populations in decline, owing to European agricultural intensification, may thus be further affected by environmental change on the wintering grounds.

Barn Swallows have been recorded foraging over various habitat types in winter but they appear to shun heavily forested areas in preference for more open habitats, such as fresh water and savannahs (Fry *et al.* 1988). Clearance of dense tropical forest may thus favour the species and create local range expansions. There is, however, some evidence that winter diets largely comprise insects which feed upon woody vegetation; this raises the possibility that any loss of tree cover from semi-open habitats, such as bushy savannah, may be disadvantageous to wintering Barn Swallows (Evans *et al.* 2003b). Climate change may, however, be a factor promoting increasing tree cover in South African savannahs (van Jaarsveld & Chown 2001).

Changes within particular habitat types, such as farmland, may be more influential. Numerous incentives promote the intensification of African farming systems, including attempts to increase agricultural exports, reduce food imports and prevent the exhaustion of soil nutrients (Larson & Frisvold 1996; McCalla 1999). To realise those aims, fertiliser application rates in sub-Saharan Africa need to be

approximately 50 kg/ha, a similar amount to that used in the UK in 1960; but they were only 11.5 kg/ha in 2000 (Larson & Frisvold 1996; World Resources Institute 2003). Most British Barn Swallows winter in South Africa where fertiliser use is much higher (48 kg/ha), but rates were double this 20 years ago. Across sub-Saharan Africa, pesticide application rates are presently six times lower than current UK rates. It thus appears that agricultural intensification in Africa is currently proceeding at a slow rate and is unlikely to exceed the levels witnessed in the UK in the early 1960s, when farmland bird populations were largely stable. While changes in farming practices in Africa will almost certainly have negative effects on biodiversity, they are arguably unlikely to pose a major threat to wintering Barn Swallow populations.

Many Afro-Palearctic migrants have been adversely affected by drought in the Sahel (Marchant 1992), and Barn Swallows are certainly affected by variations in rainfall: their range has shifted in response to changing rainfall patterns (Mead 1970); drought reduces body mass and the speed of moult (van den Brink *et al.* 2000); and winter mortality rates in a Danish population are negatively related to winter rainfall (Møller 1989). Decreased rainfall in African wintering quarters might thus reduce European Barn Swallow populations, although

it appears that the species was not greatly affected by the Sahelian drought, perhaps because Barn Swallows only migrate through the area rather than winter there.

Recent large-scale trapping (for food) at a major winter roost in Nigeria resulted in an annual harvest of around 2.2-5.6% of 40 million Barn Swallows. This may have threatened some European Barn Swallow populations, with data from ring recoveries suggesting that French populations may have been particularly vulnerable. Initiatives and development schemes to persuade hunters to cease trapping, including the provision of alternative protein sources, helped to alleviate this threat. It may now have disappeared, as very few Barn Swallows used this roost site during the 2002/03 winter; birds have probably relocated to alternative sites (Micheloni 2003).

Conclusions

The current European Barn Swallow population is probably much higher than it was before humans caused large-scale habitat change, but recent declines, both local and national, have been reported from many European countries, particularly in the west, although these reports are partly based on anecdotal evidence. In the UK, there is evidence of a slight increase in the

total population in recent years, but also of localised declines, notably in eastern England. These are probably a consequence of agricultural intensification, especially increased arable cultivation and the associated loss of livestock. Loss of nest-sites may have also contributed to declines in some areas. Conditions on their African wintering grounds may affect swallows, but there is currently no good evidence that recent changes have generated population declines, although future climate change may be a cause for concern. Agri-environment schemes often contain provisions to promote the maintenance of livestock grazing, for example by encouraging mixed farming in areas which are predominantly arable, and such schemes may also deliver benefits to Barn Swallows.

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131. Loss of marginal farmland habitats may have contributed to general declines in invertebrate abundance, reducing food availability for Barn Swallows *Hirundo rustica*

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J. Lawton Roberts/Windrush



132. Adult and juvenile Barn Swallows *Hirundo rustica* gather above the farm before beginning the trip to wintering grounds in Africa.

Red-billed Tropicbird: new to Britain

Sheila Blamire

ABSTRACT An adult Red-billed Tropicbird *Phaethon aethereus* was seen and photographed by crew members of the yacht *Marg a Rita* in sea area Sole, 32 km SSE of the Isles of Scilly, on 7th June 2001. The circumstances of the record are described and discussed here. This individual constitutes the first record for Britain.

One afternoon in July 2001, I received a phone call from Roger Barnes, whom I had got to know at the Knutsford Ornithological Society (KOS) and more recently as a member of the Cheshire and Wirral Ornithological Society (CAWOS). This was no ordinary 'catching up on the news' call, however; I could immediately hear the excitement in his voice. He had just returned from a five-week cruise in his yacht *Marg a Rita*, a 32-foot Westerly Fulmar, a bilge-keeled sailing yacht. He had left New Quay, in Ceredigion, on Saturday 2nd June to travel to Belle-Île, in the Bay of Biscay, and back – a journey of some 1,900 km. Roger was, in his own words, 'the nearest thing on board to a birdwatcher'. As usual, he had taken photographs documenting his trip, which had now been developed. Among these prints he was very pleased to see that several 'grab' shots of a mystery 'tern-like' bird seen on the trip had come out reasonably well.

His first thought was to ring Jeff Clarke from CAWOS, who had recently run a 'Tern Identification Workshop'. Jeff thought that the bird sounded like a Red-billed Tropicbird *Phaethon aethereus* from the description, but suggested that Roger show me the photographs to confirm the identification, since he knew that I had seen tropicbirds from various holiday destinations. I had first seen Red-billed Tropicbirds in the Galapagos, where it is not uncommon to see them soaring over the cliffs of islands such as South Plaza, Espanola, Genovesa, and North Seymour, and had also seen this species in Trinidad & Tobago. I had seen Red-tailed Tropicbirds *P. rubricauda* on Nosy Ve, off the south-

west coast of Madagascar, but White-tailed Tropicbird *P. lepturus* has so far eluded me. I must admit that I was expecting a few distant and probably blurred but, hopefully, 'record' shots of the bird in question. You can imagine my reaction when Roger brought them round, and there, staring me in the face, was a brilliant image of a stunning Red-billed Tropicbird!

I tried to convey the importance of the event to Roger, in that it was, potentially, the first proven record of a Red-billed Tropicbird in Britain and that, as such, the record would need to be fully documented and submitted to both the BBRC and the BOU Records Committee for their assessment. Initially, Roger found it difficult to grasp that his word would not be sufficient and that he would need to provide evidence to back up his claims so that the record would stand the test of time and any future reviews. He was then subjected to the third degree: Exactly where was the bird seen? Could he prove the exact location? What entries were made in the *Yacht Log Book* (it is a requirement of the skipper to keep this up to date)? Furthermore, we needed to know the distance from land that was currently adopted as the outer limit for UK waters in terms of admission to the British List. I had no idea at the time. Finally, were there any doubts at all as to the identification? I would need to be absolutely 100% certain before we went any further. First of all, I asked Roger to describe in detail the events of that day in June 2001.

Thursday 7th June 2001

It was 10.00 hrs on 7th June when the *Marg a Rita* left St Mary's, Scilly, for the passage

Roger Barnes



Roger Barnes



Roger Barnes



133-135. Adult Red-billed Tropicbird *Phaethon aethereus*, sea area Sole, about 32 km SSE of Scilly, June 2001.
The first record for Britain.

through the Chenal de la Helle to Dournenez, in Brittany. George Legg from New Quay was at the helm, Paul Fraser from Northwich was on look-out, Martin White from Manchester was below decks preparing lunch and Roger Barnes from Knutsford, the skipper, was sitting at the chart table trying to work out where they were and what the tide was doing to them. RB describes what happened next:

'We were about 20 miles SSE of the Scillies when GL called us on deck to view an unusual-looking bird, the like of which he had never seen in all his years at sea. It hovered and flew in large circles around the boat. We thought on more than one occasion that it was contemplating landing on the boat; we have in the past had tired birds land on top of the mast, rest for a few hours, and then fly on. This one didn't, however, but it stayed with us for about five minutes, coming close enough for us to get a good look and take some photographs.'

'The bird had the appearance and mannerisms of a large tern. I knew that it was not a European bird, or, to be more precise, it was not in my 1983 edition *Peterson's Field Guide to the Birds of Britain and Europe*. It flew between sea level and 100 feet in the air, hovering occasionally. What we immediately noticed was the very long tail (longer than the body), but we could not decide whether it comprised of one or two streamers. In brief, it was predominantly white with a large, blood-red bill, a conspicuous black eye-stripe, black on the wings towards the wing-tips and black feet.'

'While the others were watching the bird, I rushed below to change the lens on my camera. As I have only two, a 35-mm and 90-mm, the choice was not difficult! I put on the 90-mm lens, hoping that the bird would come close enough for me to get a good shot. I set the shutter speed at 1/1000th of a second, aperture to f2.8 and pre-set the distance at 30 feet. At the time, I was using up some old Kodak 200 ASA film. Fortunately the bird obliged and I managed to get one good shot. I use a Leica M6, which helps in these circumstances as the viewfinder has a larger field of view than the lens, and this made it easier to track the bird in flight.' (see plates 133-135)

Establishing the location

An index print of the film showed images of the Isles of Scilly before and France after the photographs taken of the mystery bird (plate 136). These, along with the *Yacht Log Book*, confirmed the locality of the sighting (fig. 1). Entries are updated in the log book approximately every hour and include time, course steered, barometer reading, latitude and longitude, distance to go to the next waypoint, and a narrative log. The important narrative entry made by MW against 13.00 hrs reads: 'Sea bird. Ternish – long tail, b/r [bright- or blood-red?] beak'. At the top of the page, RB subsequently added: 'Tern – v. long tail single streamer, black wing-tips, black feet, red bill, black eye-stripe'. There are various other scribbles added at a later date to this page, including 'Red-billed



136. Index print of the film used to photograph Britain's first Red-billed Tropicbird *Phaethon aethereus*, showing Scilly at the start of the roll, and France at the end, with photos taken during the journey in between, including the tropicbird (9A-11A).

Tropicbird' once the bird was identified. The latitude and longitude at 13.00 hrs were recorded as 49°40'05"N 06°09'62"W, then 49°36'01"N 06°05'32"W at 14.00 hrs, so the approximate position at the time of the sighting was estimated to be 49°38'N 6°08'W. This placed the sighting in sea area Sole, about 32 km SSE of Scilly. The British List includes birds seen 'at sea' within the British Economic Zone, which now extends to 200 nautical miles (370 km) from the nearest point of land, so the sighting was well within this zone.

Identification

Even though I was quite sure of the identification, Red-billed Tropicbird is one of three closely related species in the genus *Phaethon*, so I still did my homework thoroughly, using the internet and various field guides as key reference sources. I also looked through photographs I had taken of tropicbirds over several holidays.

Tropicbirds are medium-sized seabirds, with a body roughly the size of a domestic pigeon, and a wedge-shaped tail with exceptionally long central tail feathers, or streamers, when adult; all three are essentially white, with a more or less conspicuous black mask through the eye.

When seen well, however, each species has diagnostic characters which make identification reasonably straightforward.

The upperparts and wing pattern in particular are usually diagnostic, even from a distance. On Red-billed Tropicbird, fine, blackish-grey barring on the mantle, back and rump extends onto the wing-coverts, with the innermost secondaries being solidly dark with white fringes. The outermost primaries and primary coverts are black, forming an obvious dark wedge on the leading edge of the outer wing, while the inner primaries and most of the secondaries are white. The upperwing of White-tailed Tropicbird also shows a black wedge on the outer primaries (although this does not extend onto the primary coverts), but differs markedly from that of the former species in having a striking black diagonal band across the inner wing (from the inner median coverts to the tertials). Finally, Red-tailed Tropicbird has the upperwing completely white except for black shafts to the outer primaries, and looks entirely white-winged in the field. All adult tropicbirds have elongated central tail feathers, which are lacking in juveniles, and the colour of the central tail-streamers in adults is an important character for identification.

Date 7/6/01 744

Port TRURO Destination DOVER

Tides Constant Port DOVER 1st High Water 1155 1st Low Water 0530

Local Port BRESC 2nd High Water 0015 2nd Low Water 1800

Local Port 2214 1st High Water 0514 1st Low Water 1730

Local Port 2214 2nd High Water 1730 2nd Low Water 0514

Time	Course	Log	Log	Wind Speed	Wind Direction	Latitude	Longitude	Next Waypoint	Date
12.00	154	4709	1018	1018	1018	49°40'05"N	06°09'62"W	52	100
13.00	154	4714	1021	1021	1021	49°36'01"N	06°05'32"W	52	100
14.00	154	4716	1018	1018	1018	49°38'N	6°08'W	52	100
15.00	154	4717	1018	1018	1018	49°38'N	6°08'W	52	100
16.00	154	4721	1018	1018	1018	49°38'N	6°08'W	52	100
17.00	154	4726	1018	1018	1018	49°38'N	6°08'W	52	100
18.00	154	4731	1018	1018	1018	49°38'N	6°08'W	52	100
19.00	154	4736	1018	1018	1018	49°38'N	6°08'W	52	100
20.00	154	4741	1018	1018	1018	49°38'N	6°08'W	52	100
21.00	154	4746	1018	1018	1018	49°38'N	6°08'W	52	100
22.00	154	4751	1018	1018	1018	49°38'N	6°08'W	52	100
23.00	154	4756	1018	1018	1018	49°38'N	6°08'W	52	100
24.00	154	4761	1018	1018	1018	49°38'N	6°08'W	52	100
25.00	154	4766	1018	1018	1018	49°38'N	6°08'W	52	100
26.00	154	4771	1018	1018	1018	49°38'N	6°08'W	52	100
27.00	154	4776	1018	1018	1018	49°38'N	6°08'W	52	100
28.00	154	4781	1018	1018	1018	49°38'N	6°08'W	52	100
29.00	154	4786	1018	1018	1018	49°38'N	6°08'W	52	100
30.00	154	4791	1018	1018	1018	49°38'N	6°08'W	52	100
31.00	154	4796	1018	1018	1018	49°38'N	6°08'W	52	100
32.00	154	4801	1018	1018	1018	49°38'N	6°08'W	52	100
33.00	154	4806	1018	1018	1018	49°38'N	6°08'W	52	100
34.00	154	4811	1018	1018	1018	49°38'N	6°08'W	52	100
35.00	154	4816	1018	1018	1018	49°38'N	6°08'W	52	100
36.00	154	4821	1018	1018	1018	49°38'N	6°08'W	52	100
37.00	154	4826	1018	1018	1018	49°38'N	6°08'W	52	100
38.00	154	4831	1018	1018	1018	49°38'N	6°08'W	52	100
39.00	154	4836	1018	1018	1018	49°38'N	6°08'W	52	100
40.00	154	4841	1018	1018	1018	49°38'N	6°08'W	52	100
41.00	154	4846	1018	1018	1018	49°38'N	6°08'W	52	100
42.00	154	4851	1018	1018	1018	49°38'N	6°08'W	52	100
43.00	154	4856	1018	1018	1018	49°38'N	6°08'W	52	100
44.00	154	4861	1018	1018	1018	49°38'N	6°08'W	52	100
45.00	154	4866	1018	1018	1018	49°38'N	6°08'W	52	100
46.00	154	4871	1018	1018	1018	49°38'N	6°08'W	52	100
47.00	154	4876	1018	1018	1018	49°38'N	6°08'W	52	100
48.00	154	4881	1018	1018	1018	49°38'N	6°08'W	52	100
49.00	154	4886	1018	1018	1018	49°38'N	6°08'W	52	100
50.00	154	4891	1018	1018	1018	49°38'N	6°08'W	52	100
51.00	154	4896	1018	1018	1018	49°38'N	6°08'W	52	100
52.00	154	4901	1018	1018	1018	49°38'N	6°08'W	52	100
53.00	154	4906	1018	1018	1018	49°38'N	6°08'W	52	100
54.00	154	4911	1018	1018	1018	49°38'N	6°08'W	52	100
55.00	154	4916	1018	1018	1018	49°38'N	6°08'W	52	100
56.00	154	4921	1018	1018	1018	49°38'N	6°08'W	52	100
57.00	154	4926	1018	1018	1018	49°38'N	6°08'W	52	100
58.00	154	4931	1018	1018	1018	49°38'N	6°08'W	52	100
59.00	154	4936	1018	1018	1018	49°38'N	6°08'W	52	100
60.00	154	4941	1018	1018	1018	49°38'N	6°08'W	52	100
61.00	154	4946	1018	1018	1018	49°38'N	6°08'W	52	100
62.00	154	4951	1018	1018	1018	49°38'N	6°08'W	52	100
63.00	154	4956	1018	1018	1018	49°38'N	6°08'W	52	100
64.00	154	4961	1018	1018	1018	49°38'N	6°08'W	52	100
65.00	154	4966	1018	1018	1018	49°38'N	6°08'W	52	100
66.00	154	4971	1018	1018	1018	49°38'N	6°08'W	52	100
67.00	154	4976	1018	1018	1018	49°38'N	6°08'W	52	100
68.00	154	4981	1018	1018	1018	49°38'N	6°08'W	52	100
69.00	154	4986	1018	1018	1018	49°38'N	6°08'W	52	100
70.00	154	4991	1018	1018	1018	49°38'N	6°08'W	52	100
71.00	154	4996	1018	1018	1018	49°38'N	6°08'W	52	100
72.00	154	5001	1018	1018	1018	49°38'N	6°08'W	52	100
73.00	154	5006	1018	1018	1018	49°38'N	6°08'W	52	100
74.00	154	5011	1018	1018	1018	49°38'N	6°08'W	52	100
75.00	154	5016	1018	1018	1018	49°38'N	6°08'W	52	100
76.00	154	5021	1018	1018	1018	49°38'N	6°08'W	52	100
77.00	154	5026	1018	1018	1018	49°38'N	6°08'W	52	100
78.00	154	5031	1018	1018	1018	49°38'N	6°08'W	52	100
79.00	154	5036	1018	1018	1018	49°38'N	6°08'W	52	100
80.00	154	5041	1018	1018	1018	49°38'N	6°08'W	52	100
81.00	154	5046	1018	1018	1018	49°38'N	6°08'W	52	100
82.00	154	5051	1018	1018	1018	49°38'N	6°08'W	52	100
83.00	154	5056	1018	1018	1018	49°38'N	6°08'W	52	100
84.00	154	5061	1018	1018	1018	49°38'N	6°08'W	52	100
85.00	154	5066	1018	1018	1018	49°38'N	6°08'W	52	100
86.00	154	5071	1018	1018	1018	49°38'N	6°08'W	52	100
87.00	154	5076	1018	1018	1018	49°38'N	6°08'W	52	100
88.00	154	5081	1018	1018	1018	49°38'N	6°08'W	52	100
89.00	154	5086	1018	1018	1018	49°38'N	6°08'W	52	100
90.00	154	5091	1018	1018	1018	49°38'N	6°08'W	52	100
91.00	154	5096	1018	1018	1018	49°38'N	6°08'W	52	100
92.00	154	5101	1018	1018	1018	49°38'N	6°08'W	52	100
93.00	154	5106	1018	1018	1018	49°38'N	6°08'W	52	100
94.00	154	5111	1018	1018	1018	49°38'N	6°08'W	52	100
95.00	154	5116	1018	1018	1018	49°38'N	6°08'W	52	100
96.00	154	5121	1018	1018	1018	49°38'N	6°08'W	52	100
97.00	154	5126	1018	1018	1018	49°38'N	6°08'W	52	100
98.00	154	5131	1018	1018	1018	49°38'N	6°08'W	52	100
99.00	154	5136	1018	1018	1018	49°38'N	6°08'W	52	100
100.00	154	5141	1018	1018	1018	49°38'N	6°08'W	52	100

Weather Forecast at _____ hours

Barometer _____ At _____

Sea Area	Wind Now	Wind Later	Weather	Visibility
1	1018	1018	1018	1018
2	1018	1018	1018	1018
3	1018	1018	1018	1018
4	1018	1018	1018	1018
5	1018	1018	1018	1018
6	1018	1018	1018	1018
7	1018	1018	1018	1018
8	1018	1018	1018	1018
9	1018	1018	1018	1018
10	1018	1018	1018	1018
11	1018	1018	1018	1018
12	1018	1018	1018	1018
13	1018	1018	1018	1018
14	1018	1018	1018	1018
15	1018	1018	1018	1018
16	1018	1018	1018	1018
17	1018	1018	1018	1018
18	1018	1018	1018	1018
19	1018	1018	1018	1018
20	1018	1018	1018	1018
21	1018	1018	1018	1018
22	1018	1018	1018	1018
23	1018	1018	1018	1018
24	1018	1018	1018	1018
25	1018	1018	1018	1018
26	1018			

These feathers, which form half the total length of the bird, are white in Red-billed and White-tailed Tropicbirds, and red in Red-tailed (although the red can sometimes be difficult to see, for example in bright light against a blue sky, making this species appear short-tailed). Bill colour is another key feature, being bright red in Red-billed (dull yellow in juveniles), yellow in White-tailed (dull yellow in juveniles), and red in Red-tailed adults (blackish in juveniles).

RB's photographs reveal a bird with a white head, conspicuous black mask and white body,

and black in the outer primaries and the innermost secondaries or tertials. As there were no shots of the bird from above, the pattern of the upperwings, and the degree of barring on the upperparts could not be judged. Nonetheless, the combination of long, white tail-streamers and blood-red bill establish the identity of the bird without any doubt as an adult Red-billed Tropicbird. The length of the two central tail feathers (they look as one in the field – explaining the initial confusion) look particularly long compared with the length of the body, so the bird was possibly a male.



Sheila Blamire



Sheila Blamire

137 & 138. Red-billed Tropicbirds *Phaethon aethereus*, Little Tobago, Trinidad & Tobago, December 1997.

Distribution and status

Red-billed Tropicbirds breed in tropical and subtropical regions of the Atlantic, the eastern Pacific and the northwest Indian Ocean, together with the Red Sea, Persian Gulf and the Arabian Sea, and are pelagic outside the breeding season (juveniles disperse widely, although adults are more sedentary, typically not straying far from breeding colonies). They are the least numerous of the three tropicbirds, with a population of around 10,000 pairs, most of which are on the coasts of Central America – about 1,000 pairs in the Gulf of California, several thousand pairs in the Galapagos, and over 1,600 pairs in the Caribbean (Enticott & Tipling 1997).

Within the Western Palearctic, Red-billed Tropicbirds breed regularly only on islands off Egypt – although the species is rare, with some tens of pairs maximum – and on the Cape Verde Islands – where breeding occurs on several islands, including Santiago, Brava, Ilhéus do Rombo and Razo, but the population continues to decline owing to human persecution and was not more than 100–125 pairs in 1988–93 (Snow & Perrins 1998). The species has also bred recently on the Azores (on an islet off Graciosa in 1993), and was suspected to do so in the Canary Islands (La Gomera, in 1988). In addition, Red-billed Tropicbird has been recorded as a vagrant off Portugal (see below), the Red Sea coasts of Israel and Kuwait, as well as Madeira, the Canary Islands and the Azores, while unidentified tropicbirds, probably this species, have been seen off northwest Africa (Morocco and Mauritania) (Snow & Perrins 1998). Just beyond the limits of the Western Palearctic, small numbers also breed on Isle de Madeleine, a small island off the coast of Senegal. Northward vagrancy or dispersion from the breeding areas has been reported along the eastern seaboard of the USA north to Nova Scotia, Canada.

The Cape Verde population belongs to the race *mesonauta*, which has a rosy tinge in fresh plumage, bold black eye-stripe, and other dark areas of the upperparts and flight feathers appear blacker than on the other two races. Nominate *aethereus* has the dark bars on the upperparts and the dark areas of the primaries and secondaries paler and more grey than those of *mesonauta*. The race *indicus*, which occurs in the Red Sea, Persian Gulf and Arabian Sea, is smaller than the other two races, with a reduced

black stripe through the eye and a more orange-toned bill. Although the bird seen from the *Marg a Rita* could not be assigned to a particular subspecies with certainty, it was considered to be probably of the race *mesonauta*, which, as well as breeding on Cape Verde and off Senegal, nests in the Caribbean and in the eastern Pacific.

Records of Red-billed Tropicbirds in Europe

Prior to the record discussed here, the only acceptable record of Red-billed Tropicbird in western Europe was of one at sea, 162 km due west of Portugal on 13th August 1988 (Moore 1990; Knox 1994). Other records have involved tideline corpses, including a fresh immature male in The Netherlands on 27th January 1985 (Bruinzeel 1986), and a probable immature female of the race *indicus* at Landguard Point, Suffolk, on 17th February 1993 (Knox *et al.* 1994). The latter was found close to the container port of Felixstowe; Knox *et al.* (1994) suggested that the bird most likely landed aboard a container ship in the Red Sea and subsequently died, and that the body was either dumped or washed overboard in or near Felixstowe. The identity of one found dead near Malvern, Hereford & Worcester, in about 1854, and now in Norwich Castle Museum, is not in doubt, but the provenance of this record is considered unproven by BOURC (Knox 1994).

Following the sighting from the *Marg a Rita*, another (or the same) Red-billed Tropicbird was seen off Jaonneuse, Guernsey, on 16th September 2001 (Rogers *et al.* 2002). Then, on 29th March 2002, one was seen from the M. V. *Scillonian*, about 6.5 km east of the Isles of Scilly, and another (or perhaps the same individual) was reported by three observers about 1.5 km off The Lizard, Cornwall, less than a month afterwards, on 21st April 2002 (Rogers *et al.* 2003). As stated by Rogers *et al.* 2003, if no more follow for a number of years, the statistical significance of this cluster will need to be considered – implying that if there are no more records for some time, then perhaps these four sightings should be attributed to just one or two individuals.

Acknowledgments

I would like to sincerely thank Roger Barnes for giving me the opportunity to get involved in this historic record and for his 'innocent' question to me one day: 'Have you ever found a 'first' for Britain, Sheila?' the recollection of which never fails to amuse, if not frustrate, me!

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EDITORIAL COMMENT Colin Bradshaw, Chairman of the British Birds Rarities Committee commented: 'A fantastic tale that, once again, shows the potential for pelagic trips in British waters. These remarkable photographs prove that this is indeed an adult, or near-adult, Red-billed Tropicbird, and the entry in the log book firmly places it well within British waters. Although it is not possible to assign this individual to a particular subspecies, the blood-red bill and broad black streak through the eye appear to eliminate the race *indicus*, in which the bill averages slightly more orange with black cutting edges, and the eye-streak is less well developed behind the eye. Separation of *mesonauta*, breeding both in the Caribbean and around the Cape Verde Islands, from the nominate form is difficult, and relies on careful examination of the width and intensity of the black mantle-barring. The only confusion species was White-tailed Tropicbird, which was readily eliminated by the pattern of black in the outer primaries, absence of black carpal bar and bill colour.'

Eric Meek, Chairman of the British Ornithologists' Union Records Committee, commented: 'A truly exciting addition to the British List – and a relatively straightforward one for the BOURC! The photographic evidence left no doubt as to the identification to species level, so the only major question that remained was the authenticity of that evidence. The co-ordinates of the sighting had been recorded in the yacht's log and, once the contact prints had been examined and seen to show the images of the bird falling neatly between recognisable landscapes in both Scilly and France, the committee had no hesitation in accepting this as a British "first". The only slight doubts related to the race involved, *mesonauta* being considered most likely but not proven. Increasing sea temperatures around Britain seems a likely reason for an occurrence such as this and it remains to be seen what further species may occur in British waters as a result of that process.'

Looking back

Seventy-five years ago:

'BRITISH BRED LAPWING REPORTED FROM ITALY. A LAPWING (*Vanellus vanellus*) ringed (U.8960) as a young bird by Dr. H. J. Moon at Kirkby Lonsdale, Westmorland, in June, 1928, has been reported as having been shot on March 4th, 1929, at Rovigo (Venetia), Italy, by Signor C. Rizzato. As the regular trend of Lapwings from this country is to the south-west and south, this occurrence must be considered as quite extraordinary. The only other birds ringed in this country and reported from Italy have been a Wood Warbler [*Phylloscopus sibilatrix*] and a Cuckoo [*Cuculus canorus*]. Ringed Lapwings hitherto reported from Italy have all originated from Hungary with the exception of one from south-eastern Germany. H. F. WITHERBY.' (*Brit. Birds* 22: 375-376, May 1929)

'BREEDING OF LESSER TERN IN SOMERSET. IN July, 1928, I found a pair of Lesser Terns (*Sterna a. albifrons*) breeding on the coast of Somerset. I had them under observation on July 3rd and 4th, and on the latter date watched one of them down on to a nest with two eggs, of which I have published a photograph in the *Report on Somerset Birds*, 1928, issued by the Ornithological Section of the Somerset Archaeological and Natural History Society. Pairs and single birds have been reported on the coast in May for several successive years and, as I had reason to believe when I published my note in the Somerset Report and have since ascertained definitely, 1928 was not in fact the first year in which they bred. The above is, however, the first authenticated instance recorded. B. W. TUCKER.' (*Brit. Birds* 22: 376, May 1929)

The migration of Pallid Harrier across the central Mediterranean

with particular reference
to the Strait of Messina

Andrea Corso and Carmela Cardelli



139. Second-calendar-year Pallid Harrier *Circus macrourus* migrating north at the Strait of Messina, southern Italy, May 2002 *Michael Sammut*

Pallid Harriers *Circus macrourus* are medium- to long-distance migrants, breeding in eastern Europe and western and central Asia, from the Black Sea to the Yenisey River and Lake Baikal. Some birds winter in North Africa, the Balkans, Turkey and throughout the Middle East, but the majority spend the winter months in the Indian subcontinent (plus Myanmar) and sub-Saharan Africa (Snow & Perrins 1998; Ferguson-Lees &

Christie 2001, fig. 1). Although movements and migration through the Middle East are well-studied (e.g. Shirihihi & Christie 1992, Shirihihi *et al.* 2000, Alon *et al.* 2004), very little is known about their migration through the central Mediterranean yet, according to our data, this route may be as important as that through the Middle East. In this article, we present new data on the species' migration through this region.

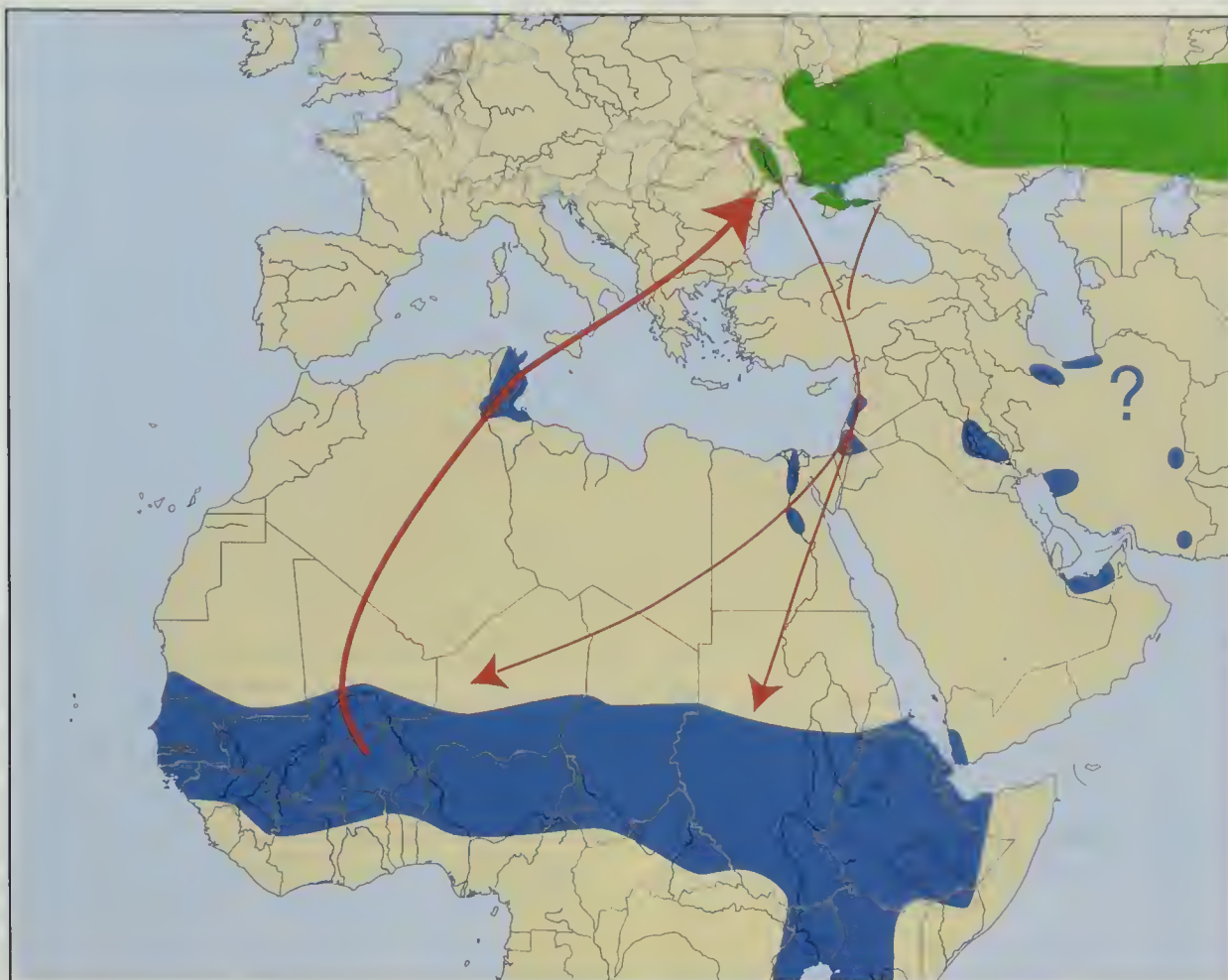


Fig. 1. Key migration routes between breeding (green) and wintering areas (blue) of Pallid Harriers *Circus macrourus*. Note the importance of the Middle East during autumn migration, and of a central Mediterranean route through Tunisia and southern Italy in the spring.

The Strait of Messina survey

Since 1986 (CC)/1990 (AC) we have participated in the Strait of Messina survey, which was set up for the protection (from illegal shooting) and counting of migrant raptors and storks (see Corso 2001); this survey was initiated by the Lega Italiana Protezione Uccelli (LIPU), and organised and supported by the World Wide Fund for Nature (WWF) from 1990. From 1984 to 1995, data were collected irregularly during April-May (Giordano 1991; Zalles & Bildstein 2000; unpublished data), but from 1995 to 2001 inclusive we have both been permanent counters on this project, surveying raptors full-time during April and May; data in these years are from our counts, and those of other permanent counters (G. Chiofalo, A. Giordano, D. Ricciardi and L. Romano). All our data on Pallid Harriers from Messina come only from counts on the Sicilian side of the Strait (since no detailed comparison between Sicilian records and those from mainland Italy has yet been made, we do not include the latter).

From 1995 to 2001, observations at the Strait

of Messina were carried out daily, from 1st April to 27th or 28th May, from sunrise until dusk (approximately 7.00 am to 7.00 pm local time). Counts were made in all weather conditions (since raptor passage may be heavy even during strong rain and mist) but several observation points were used, the choice depending on wind strength and direction; all these are in the Messina town province and all but one are along the Peloritani Mountains, from 100 m up to 1,100 m above sea level. In strong southerly winds, an observation point at sea level (Capo Peloro, at the northeasternmost point of Sicily; plate 142) has been used. This site is good for counting migrating harriers, since they tend to use active flight and to follow the coastline more than other (larger) species, which are more dependent on the thermals which develop over land as it warms up.

Data from other sites in the central Mediterranean are chiefly from literature research and fellow raptor enthusiasts, but also include some personal observations; while those for the Middle East were derived entirely from the literature.

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140. The Strait of Messina, southern Italy, from Capo Peloro, at the northeastern tip of Sicily; this site is good for counting migrant harriers *Circus* crossing the Strait, especially in poor weather (see text).

Results

Migration of Pallid Harriers at the Strait of Messina

Between 1984 and 2001, a total of 459 Pallid Harriers were observed during the spring migration (fig. 2). During this period, our data show a marked increase in the numbers recorded in spring, with a mean 6.7 birds per year between 1984 and 1993, and a mean of 49.0 per year during 1994-2001. We estimate that the number of northbound Pallid Harriers has been 100+ per spring since about 1998;

spring 2001, when 132 were counted during April-May (plus another 20 during February-March), was clearly exceptional (Corso in prep.). Early migrants, in February-March, and those observed at nearby sites which are not part of the Messina project, are not included in fig. 2, so the true numbers using this flyway are clearly greater than fig. 2 suggests.

The increase shown may be due in part to better knowledge of the field identification of small harriers in recent years, which means a greater proportion of females and immatures

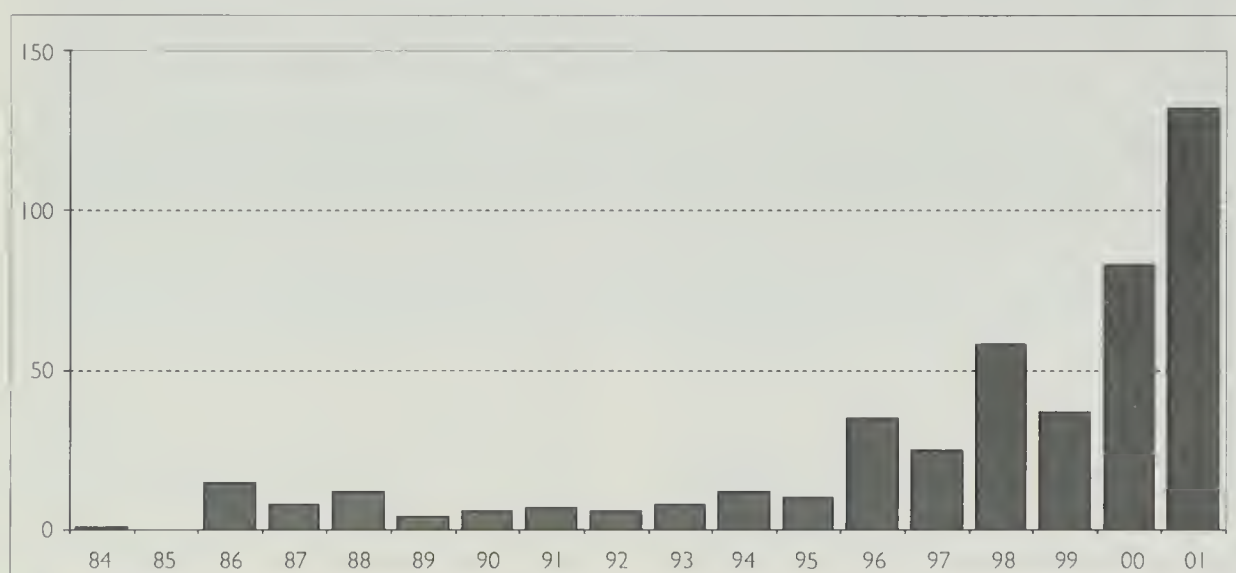


Fig. 2. Numbers (total) of Pallid Harriers *Circus macrourus* recorded in spring (April and May), Strait of Messina, southern Italy, 1984-2001. A grand total of 459 individuals was recorded in these 18 years (mean = 25.5, range: 0-132). During 1998-2001, counts were also made in February-March (Cardelli & Corso in prep.) but these are not included in fig. 2. Furthermore, in 1998, 45+ Pallid Harriers were recorded from a site close to our study area (see text); these are also not included here.

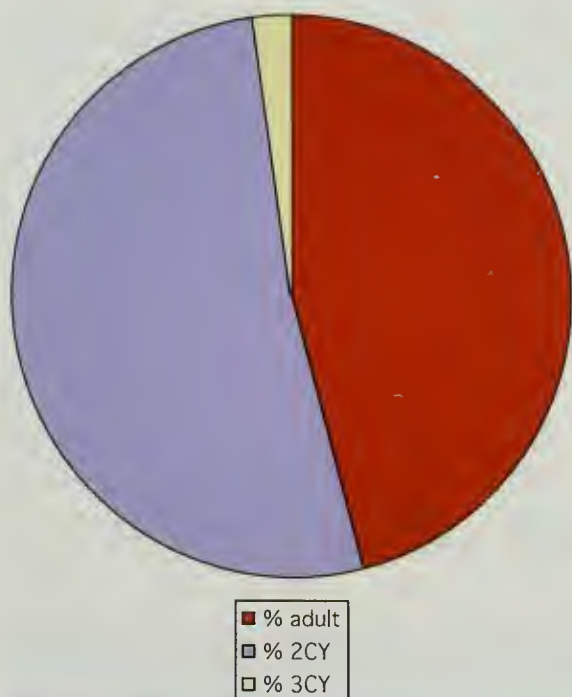


Fig. 3. The age distribution of Pallid Harriers *Circus macrourus* recorded in spring (April and May), Strait of Messina, southern Italy, 1997-2000 (n=203). Note that % 3CY refers to males only as 3CY females could not be safely distinguished from older females and so have been included in the % adult total.

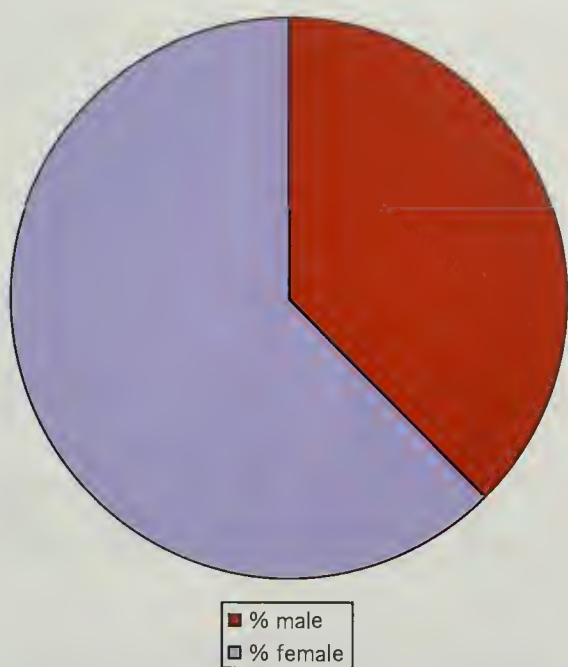


Fig. 4. The proportion of males and females among adult (third-calendar-year or older) Pallid Harriers *Circus macrourus* recorded in spring (April and May), Strait of Messina, southern Italy, 1997-2001 (n=160).

were identified positively, but also to the more thorough and systematic survey protocol in later years. Indeed, an increase in numbers has also been shown by other migrating raptors (Corso 2001). Nonetheless, looking simply at the period 1996-2001, when survey effort and identification expertise would have been fairly constant, a clear increase in numbers is still evident (fig. 2), suggesting that our data reflect a genuine rise in numbers.

Detailed records of the age and sex composition of migrating Pallid Harriers were made during 1997-2001 (figs. 3 & 4; table 1). In this period, we observed 335 birds, of which 60 (17.9%) were adult males, 100 (29.9%) were adult females and 175 (52.2%) were second-calendar-year (2CY) birds. Of the 60 adult males, only seven (11.7%) were identified as being in their third-calendar-year (3CY). Because of the

extreme difficulty of identification, the separation of 3CY females from older females was not attempted. In terms of the sex ratio, 37.5% of the adults were males and 62.5% were females. Juveniles were sometimes sexed using iris colour (exceptionally!) or by plumage characteristics/wing shape, but this is not considered further here. A detailed breakdown of the age/sex composition in each year is given in table 1.

The timing of migration of different age/sex classes in 1997-2000 is shown in fig. 5. This shows clearly that, in spring, males migrate earlier than females, while adults tend to migrate earlier than 2CY birds. Similar findings have been reported for other harriers (Gustin & Pizzari 1998) and raptors (e.g. Shirihihi & Christie 1992, Yosef 1996). There is also some variation in timing between years. For example,

Table 1. Migrant Pallid Harriers *Circus macrourus* recorded in spring (April and May), Strait of Messina, southern Italy: percentage of males, females and second-calendar-year birds in each year, 1997-2001.

	Male	Female	2CY	n
1997	52	20	28	25
1998	7	31	62	58
1999	13	41	46	37
2000	35	34	31	83
2001	7	26	67	132

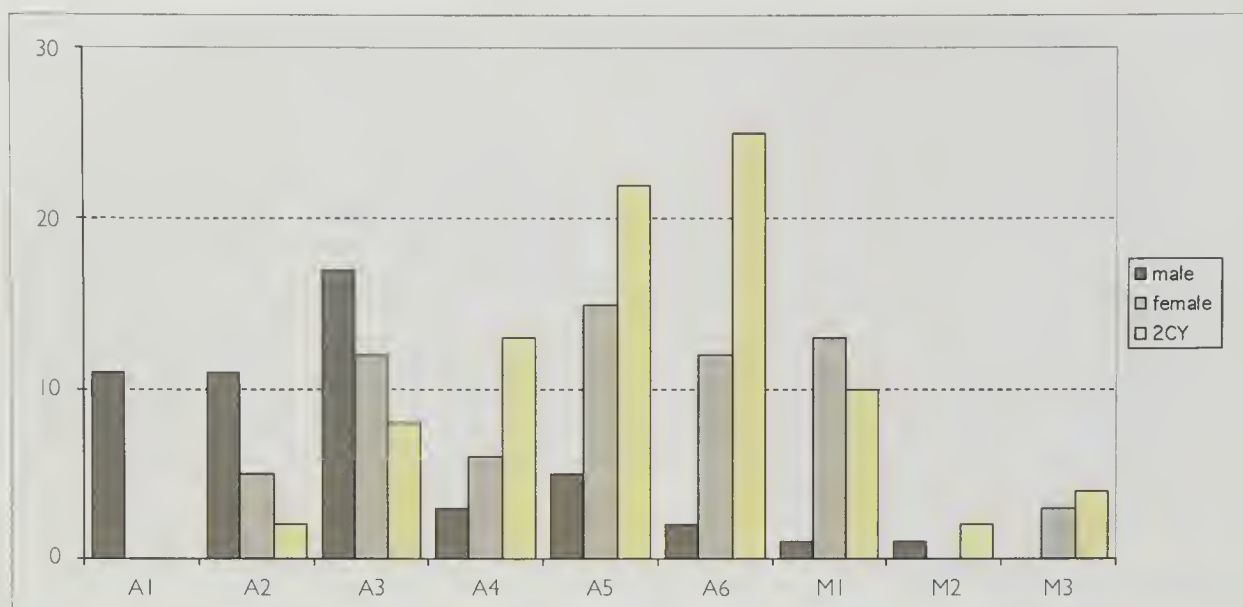


Fig. 5. Migrant Pallid Harriers *Circus macrourus* recorded in April and May, Strait of Messina, southern Italy, 1997-2000: males, females and second-calendar-year (2CY) birds counted per five-day period (A1, A2, A3, etc.). These figures show that the peak passage of males was in the third five-day period in April, while counts of females peaked later in April, in the fifth such period. Numbers of second-calendar-year birds were highest in late April. In summary, 96% of males recorded were in April ($n=49$); 75% of females ($n=50$) were in April, with 25% ($n=16$) in May; and 81% ($n=70$) of juveniles passed through in April and 19% ($n=16$) in May.

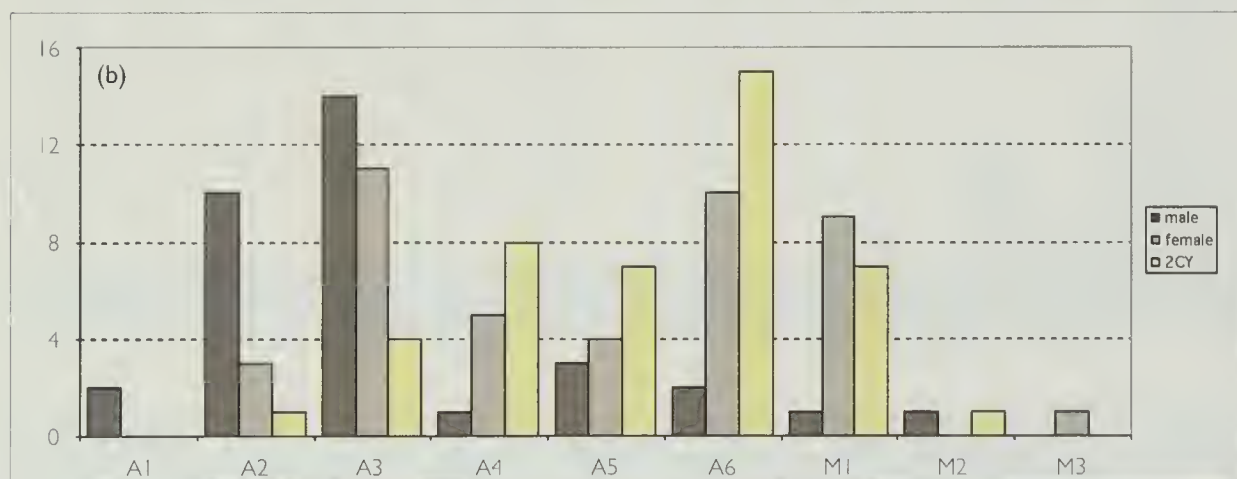
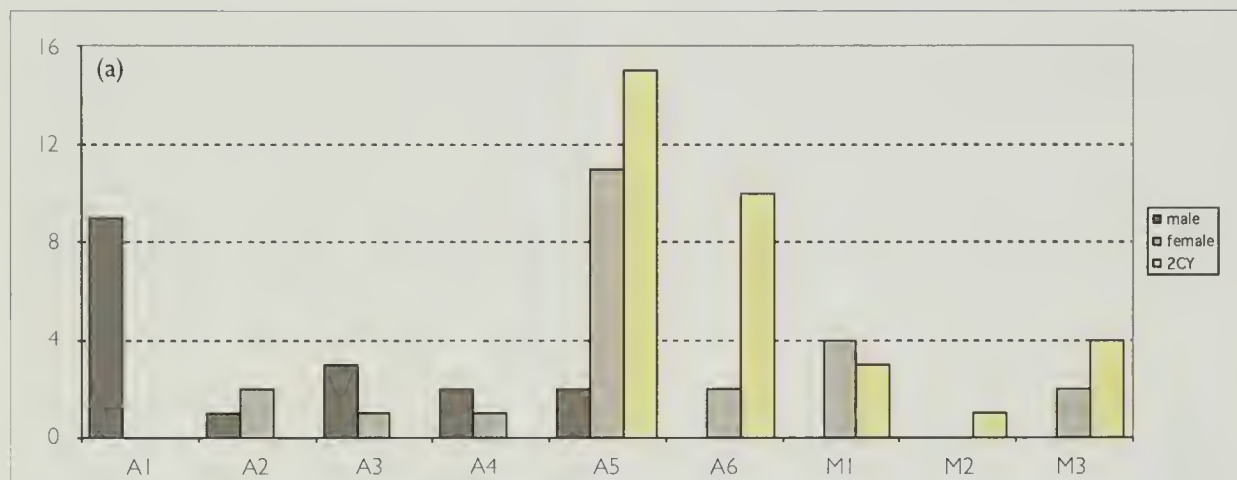


Fig. 6. Migrant Pallid Harriers *Circus macrourus* recorded in spring (April and May), Strait of Messina, southern Italy: males, females and second-calendar-year birds counted per five-day period in (a) 1997-98, and (b) 1999-2000.

compare the results for 1997-98 with those for 1999-2000 (fig. 6); these clearly show that adult males were migrating later in the latter two-year period than in the former, although the pattern for females and 2CYs is less clear-cut. A similar delay in migration in 1999-2000 was noted in several other raptor species (Cardelli & Corso in prep.).

Migration elsewhere in the central Mediterranean

In Sicily, away from the Strait of Messina, Pallid Harrier is a scarce but regular migrant, most often recorded in the east of the island and along the south coast. In fact, on the island of Marettimo, off the west coast of Sicily, none was observed during a survey in spring 1998 (Agostini & Logozzo 1998), although one or two have been recorded here during casual observations in other years (Panuccio *et al.* in prep.). On the island of Ustica, off northern Sicily, 44 were counted between 22nd March and 20th May 2002 (Agostini pers. comm.). In general, Pallid Harriers migrate on a broad front through Sicily between March and May, so that sightings away from our standard observation sites for the Messina survey are not infrequent. In particular, at Forza d'Agrò, to the south of the Strait, over 45 Pallid Harriers (some males, but mostly 2CY birds) were observed on 20th April 1998 (D. & I. van den Velde pers. comm.), and these were not recorded by the Messina survey. Away from regular count sites, 2001 was again a record year.

Few Pallid Harriers migrate through Sicily in autumn. There is no organised survey at the Strait of Messina, but casual observations reveal up to five individuals per year between late August and late September, most (c. 90%) of these being juveniles (Cardelli unpublished data). None was counted at Marettimo Island in autumn in 1997-2000 (Agostini *et al.* 2000; Agostini pers. comm.). At various sites in Siracusa (southeast Sicily), typically up to five individuals are seen each autumn, again predominantly juveniles (Corso pers. obs.), and occasionally one or two overwinter (Corso & Iapichino 1998).

In central-southern Italy, Pallid Harrier is also a regular migrant, though much less abundant than at the Strait of Messina. The highest counts are from Capo d'Otranto, in southeast Puglia (fig. 7), where 72 were counted between 10th March and 19th May 1989 (Gustin &

Pizzari 1998). Of these, 44 (61%) were females, 3 (4%) were males and 25 (35%) were 2CY birds; all males were seen in March, 63% of females were seen in April and 37% in May, while 96% of 2CY birds passed through in May (Gustin & Pizzari 1998). Some 20-40 individuals have been counted annually between March and May in recent years, with 40 in spring 2001 (Mellone, Premuda, Gustin & Catoni pers. comm.). This site is the easternmost point on the Italian coast, and may be used as a 'springboard' by raptors crossing the sea to the east (fig. 7). We presume that many of the Pallid Harriers crossing the Strait of Messina pass through this area en route to eastern Europe and Russia or Turkey. Mt Gargano, in northern Puglia, may also act as a springboard (there have been only occasional observations here), while a third site is Mt Conero (near Ancona, Marche region) in central Italy (fig. 7). Counts here are typically much lower than at Capo d'Otranto, and probably only a small percentage of the harriers migrating through Messina reach as far north as Mt Conero. Around 10-15 birds are estimated to use this flyway each spring (although a record count, of 33 individuals, was made in 2002; Borioni pers. comm.), most of which are adult males. This may mean that females/2CY birds have not been identified on migration, and that true passage is greater than suspected; or that the males are heading for northernmost breeding grounds, to which few immatures travel. Farther north, Pallid Harrier is an irregular migrant, and in most of northern Italy it is a vagrant. In autumn, the situation is similar to that in the south, with very few records each year.

Migrant Pallid Harriers passing Cap Bon, in northeast Tunisia, are surely the same as those using the Strait of Messina flyway (fig. 7). There are no regular surveys here, but (for example) 17 were counted between 26th March and 14th April 1974 (Thiollay 1975), 15 in roughly the same period in 1985 (Gultier unpublished data) and five on 25th March 1987 (Azafzaf unpublished data). During a three-year spring survey at Cap Bon, four were counted in 1990, seven in 1991 and five in 1992 (Kisling *et al.* 1994), the timing of which fit well with Messina records in the same years. At El Haouaria, on the north side of Cap Bon, 189 Pallid Harriers were ringed between 1953 and 1966, of which seven were subsequently recovered in Italy, and 12 in

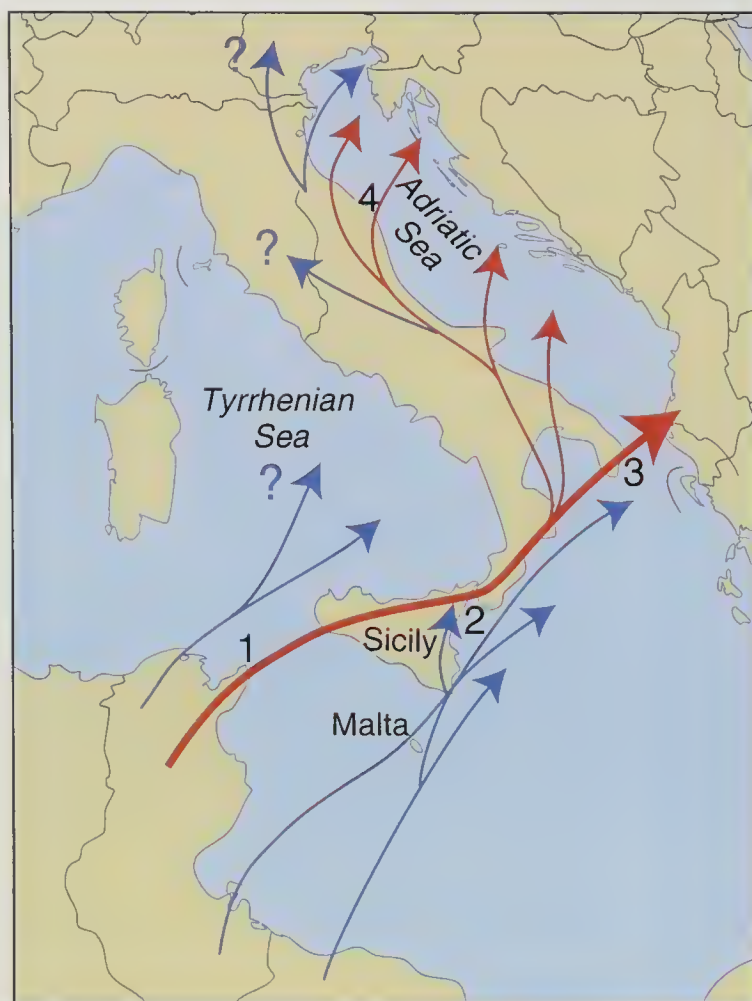


Fig. 7. Spring migration flyways of Pallid Harriers *Circus macrourus* across the central Mediterranean. The main flyways are in red, the thicker lines indicating the main routes. Secondary flyways are marked in blue. Most of the birds leave Africa from northern Tunisia (note the significance of Cap Bon (1)), pass over the Strait of Messina (2) and continue north and east from there (note the importance of Capo d'Otranto (3)). Smaller numbers of Pallid Harriers cross the Adriatic Sea farther north along the Italian coast, most of them from Mt Conero (4); while a few continue farther north still, or even use a route along the Tyrrhenian Sea.

eastern Europe (Bortoli 1967). Of these, three were recovered in Sicily, as follows (ringing date/recovery date/recovery location): (i) adult, 8th April 1955/12th April 1955/Catania, south-east Sicily; (ii) 8th April 1955/8th November 1957/Bagheria, northwest Sicily; and (iii) 7th April 1963/31st March 1967/Catania (Iapichino & Massa 1989). The other four recovered in Italy were at the Strait of Messina, on the Calabrian side, during spring migration (Bendini 1983). The numbers ringed at Cap Bon suggest that regular passage is probably much greater than limited observational data show, perhaps similar to that at Messina; it may also mean that the wintering population in Tunisia is greater than presently realised.

There are few records from Malta, which

might be assumed to be a natural stepping stone between Tunisia and Sicily: six were counted during March-May 2000, four in the autumns of 1990-95 and none in the autumns of 1996-2000. Nonetheless, and following a recurring theme, there were record counts from Malta in 2001 and 2002, with up to nine birds in spring and up to five in autumn (Sammuto, Montalto & Bonavia pers. comm.).

Migration in the Middle East

In Israel, the maximum spring count at Eilat, southern Israel, was 113 in 1985 (Shirihai & Christie 1992), although the peak day count was 38 on 3rd April 1983 (28 males, 10 females). Typically, 2CY birds pass in the second half of April, later than adults. In fact, most of the birds migrating through Israel in spring are adults (Shirihai & Christie 1992); for example, in spring 1994, 57 were counted, all of which were adults (Yosef 1996). The species is scarcer in autumn at Eilat, but there are high counts farther north, from the Northern Valleys/Kfar Qassem surveys (see Alon *et al.* 2004), probably the highest for the Western Palearctic: a mean of 45 per year were recorded from 1990 to 1999, including an exceptional 129 in 1994 (Alon *et al.* 2004). The 1994 record stood until autumn 2003, when fully

137 individuals were counted (Y. Perlman pers. comm.).

Significant numbers have also been recorded in Jordan; for example, 15 were observed on 29th-30th September 1994 at Ghadir Burqu' (Andrews 1996), and 164 were logged from 24th September to 20th October at the same site in 1998 (Shirihai *et al.* 2000). In the Red Sea, at the Bab al Mandab, 11 birds (three males) were recorded in autumn 1985 and 67 (15 males) in 1987 (Welch & Welch 1988). At Borçka/Arhavi, northeast Pontics, Turkey, 133 were counted in autumn 1976 (Andrews *et al.* 1977) but only 11 in spring 1994 (Shirihai *et al.* 2000), while at Belen Pass, southern Turkey, four were counted in autumn 1976 (Sutherland & Brooks 1981). At the Bosphorus, where high counts would



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141. Male Pallid Harrier *Circus macrourus*, Ustica, off northern Sicily, date unknown.

perhaps be expected, surprisingly few have been recorded, with just sporadic, single-figure records (Beaman 1973; Beaman & Jacobsen 1974; M. Ozen pers. comm.).

Apart from the spring counts at Eilat, records of Pallid Harriers passing through the Middle East in spring are not common, and the bulk of the records are in autumn – the reverse of the situation in the central Mediterranean.

Discussion

The Strait of Messina is the most important European spring migration flyway for Pallid Harrier, and among the most important in the entire Western Palearctic. At this site, the numbers counted in spring have increased in recent years, and the proportion of adults in the migrant population counted has also increased. Generally speaking, the proportion of young birds is an indicator of breeding success and the general health of a population. A similar decline in the proportion of migrant juvenile Steppe Eagles, a species with a comparable breeding range, has been registered in Israel (Shirihai *et al.* 2000) and perhaps similar factors may be affecting these two species. Nonetheless, in 2000-02, record numbers were recorded in several European countries, with a high proportion of juveniles (see table 1), suggesting that the West Palearctic population as a whole is currently vibrant.

There appears to be a clear difference in the age profile of birds migrating through the central Mediterranean in spring compared with those moving through the Middle East. The proportion of 2CY birds at the Strait of Messina

is relatively high (52.2% overall, 1997-2001), much higher than that at Eilat, where most of the birds are adults and few immatures are recorded (Shirihai & Christie 1992; Yosef 1996). This may reflect differences on the wintering grounds. For example, there seem to be clear differences in the age ratio of wintering Pallid Harriers from East to West Africa. Thus, in Tanzania, c. 80% of the birds are adult males (Stronach 1991), while observations in Senegal, Mauritania and Niger suggest that in these areas there is a high percentage of juveniles (although fewer individuals in general than in East Africa; K. Meyer pers. comm.). Most birds passing through the central Mediterranean in autumn are juveniles and very few are adults, whereas in the Middle East there are many more adults, perhaps even a majority (Shirihai *et al.* 2000). Like adult Montagu's Harriers *C. pygargus* (Arroyo & King 1996), most adult Pallid Harriers are actively moulting during autumn migration (Forsman 1999; pers. obs.) so they would be expected to avoid long sea-crossings such as the Sicilian Channel where possible; perhaps most of them prefer to fly across the Middle East en route to the wintering grounds in East Africa, and from there some eventually move westwards (to wintering grounds from which they head north again in spring, crossing the central Mediterranean). The moult-related hypothesis, that birds prefer to avoid crossing long stretches of water in autumn, would also account for the large numbers of Pallid Harriers recorded in Israel and elsewhere in the Middle East in autumn.

The timing of spring passage in the Middle

East is clearly earlier than that in the central Mediterranean; at Eilat, the majority occur between the first week of April and 10th May (Shirihai & Christie 1992; Yosef 1996) while at Cap Bon and the Strait of Messina comparable dates would be between the fourth week of April and about 15th May. This difference may be related to the fact that many spring migrants through Israel are males, which both migrate earlier and have wintered farther north.

Finally, a double peak of immatures passing through the central Mediterranean is interesting. As shown in fig. 5, most juveniles pass through the Strait of Messina in late April/early May, but there is also a small passage of juveniles through Sicily in mid March, which peaks at the end of that month or in early April (and is often not apparent at Messina – hence it is not obvious in fig. 5). This may reflect two different wintering areas, one much closer (perhaps in Tunisia?) than the other. It may also be the case that during the record influx in Europe during 2000-02, many juveniles wintered in North Africa (Corso in prep.).

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Notes

Aggressive behaviour in Red Grouse

Arnold Illingworth's note regarding aggressive behaviour in Red Grouse *Lagopus lagopus* (*Brit. Birds* 97: 47) brings to mind an encounter I had with a Red Grouse on 21st January 1996. I was mountain biking along a bridle track on the western edge of Derwent Moors, above Ladybower Reservoir in the Peak District National Park, when I stopped to check the map. I quickly noticed a Red Grouse *Lagopus lagopus* in nearby heather, about 2 m away, with head and neck upright and red wattles distended. To my surprise it approached me, then started to lunge at my ankles. I tried to gently discourage it with my foot, but it then attacked my boot, latching onto the laces. Having disengaged my foot, I decided to retreat instead, initially pushing my bike and walking beside it. The bird

followed with wings drooped, making low-pitched calls. I jumped on the bike and started to pedal, and the bird maintained pace with intermittent running and flying behind me. This must have gone on for 40-50 m, after which the bird settled on a wooden post at the corner of a drystone wall and continued to call as I disappeared into the distance.

This sequence of events must have lasted about 10-15 minutes. I was clad in black from head to foot with the exception of bright yellow sleeves to my windproof. I would concur with Mr Illingworth in finding this a quite incredible experience at the time, made all the more surreal by the dark, bleak nature of the weather that day and the absence of other people for several miles in either direction.

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Fulmar wreck in the southern North Sea: preliminary findings

During the last week of February 2004, a marked increase in the mortality of Fulmars *Fulmarus glacialis* in the southern North Sea first became evident. Since then, a true Fulmar 'wreck' has developed, involving thousands of casualties. Large numbers of tideline corpses were reported from the Belgian and French Channel coasts, and a noticeable increase in dead birds was observed at least as far north as the German Bight and the coastline of north-east England. In the northern part of The Netherlands, significant numbers first appeared on beaches on 25th and 26th February.

In The Netherlands, a long-term research project is investigating the occurrence of litter in the stomach contents of Fulmars in the North Sea as an environmental monitoring indicator (Fulmars have the unfortunate habit of ingesting almost any small items they encounter on the sea surface). The Fulmar study is part of the 'Save the North Sea' marine litter project (SNS), which is supported by the EU Interreg IIIB Programme, and Fulmars are being used as the symbol of the SNS (see www.savethenorthsea.com/fulmars).

In the case of the present wreck, processing all the available material from different parts of

the North Sea basin will take a considerable time, but some preliminary findings were established by dissecting 15 Fulmars from The Netherlands: eight from the north (Windbreker, Noord Holland, 26th February), and seven from the south (RIKZ, Zeeland, 1st-5th March). In spite of the small sample size, there were some interesting results (see table 1) when birds from the current wreck were compared with 'normal' tideline Fulmars from The Netherlands (1982-2001).

Plumage fouling with oil or other contaminants appears to have had no direct role in the mortality, as fouling rates are below the long-term average. All birds were severely emaciated, i.e. they had depleted all of their fat reserves and most of the protein reserves in flight muscles. Although females are slightly more common than males in our long-term February-March samples, the wreck seems to contain a remarkably high proportion of adult females. In terms of origins of the birds, our current data do not support a sudden influx of northern birds (which can be judged by analysing the proportion of dark-phase – 'blue' – birds), but more work is needed on this.

It is particularly interesting that an unusu-



142. Fulmar *Fulmarus glacialis* corpses on Blakeney Point, Norfolk, March 2004; the right-hand bird is a dark-phase ('blue') Fulmar. BB reader Richard Porter reported counting no fewer than 130 dead Fulmars along the shoreline of the Point on 11th March, including 24 of the dark phase.

ally high proportion of the wrecked birds have not completed their moult of primaries and rectrices, as healthy birds finish moulting these feathers long before February. Primaries are normally moulted first, with tail moult starting once primary moult is about 75% complete. Immatures begin their moult early in the season and have almost completed it by the end of summer. Adults begin to moult only when the breeding season is well underway, but even successful breeders will normally have completed primary and tail moult by December. Moulting places a high energy demand on the individual, and the moult process will be slowed or interrupted if environmental conditions are bad. Such cases of arrested moult are abnormally common in the current wreck, being found in about three out of every four birds. The stage at which the moult process has been interrupted shows that these birds had encountered serious energy problems at least four to five months before they died in the southern North Sea.

The current Fulmar wreck appears not to have been triggered by a sudden catastrophic event such as a major pollution incident, severe weather or disease. The problems that these birds have faced date back to at least October 2003, or probably earlier. The breeding success of several seabird species in northern Scotland was exceptionally poor in summer 2003 (see

Seabird Group Newsletter Nos. 95 and 96), and this coincided with an apparent shortage of sandeels (*Ammodytidae*). By comparison with other species such as Arctic Skuas *Stercorarius parasiticus*, Kittiwakes *Rissa tridactyla* and terns *Sterna*, and even Common Guillemots *Uria aalge*, Fulmar breeding success was not disastrous, but perhaps the extra effort of breeding when food was scarce has taken a heavy toll in the post-breeding period. The sample of corpses analysed suggests that food supplies in the breeding areas are still low. Breeding adult Fulmars usually spend much of the winter near their colonies, to allow regular attendance of their nest-sites. Females have a less prominent role in such pre-breeding nest attendance, which could explain why it is that adult females especially have spread out in search of better foraging. Persistent northwesterly storms in February may have assisted in their accumulation in the southern North Sea, but the lack of adult males suggests that travelling with these storms was a choice rather than forced upon them. Unfortunately, the southern North Sea has not offered female Fulmars the possibility to recuperate. A combination of events – e.g. low food abundance, persistent bad weather, higher levels of pollutants, and secondary diseases – may have played a role in the current wreck. For example, stomach analyses of the dissected

Table 1. A comparison with long-term data of condition, size, plumage-morph and moult-score of Fulmar *Fulmarus glacialis* corpses found in The Netherlands during the wreck of February 2004.

	February/March 1982-2001 (n=186)	February/March 2004 (n=15)	Notes
% plumage fouling	43%	33%	With oil and/or (e.g.) paraffin-like substances
Mean condition score	1.8	1.1	On scale 0 (emaciated) to 9 (excellent)
% adult	63%	93%	By inspection of sexual organs
% female	66%	93%	By inspection of sexual organs
% dark colour phases	11%	13%	Dark indicates high-Arctic origin
Mean head length, female	91.9 mm	90.6 mm	Small size indicating more northerly origin
% primary moult (mean score)	8% (99.7)	60% (97.4)	Moult completed at score 100
% tail moult (mean score)	20% (62.6)	73% (32.3)	Moult completed at score 70

birds showed an average of about 25 pieces of ingested plastic particles. This is not unusual in this region, but will clearly hamper individuals trying to restore their body condition. Seabird wrecks often seem to follow 'Murphy's Law': once something goes wrong, everything goes wrong, and the current wreck seems an example of this. Many potential secondary factors may be involved in the southern North Sea; but the event has nonetheless been triggered by older and deep-seated problems in distant areas.

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Acknowledgments

Thanks to all contributors to Beached Bird Surveys and those who collected Fulmar corpses. Please continue counts and collections in collaboration with regional/national co-ordinators, or contact Kees.Camphuysen@wxs.nl (BBS counts) or Jan.vanFraneker@wur.nl (dissections). Please note that freshness of corpses is not a prerequisite for Fulmar dissections, but that internal organs (i.e. stomach) have to be present. This preliminary report will be made available on the Dutch Seabird Group website www.zeevogelgroep.nl. For updates on numbers of beached birds and their regional spread please consult the NZG-NSO page <http://home.planet.nl/~camphuys/fulmarwreck.htm>.

EDITORIAL COMMENT We have published this Note now because it is so topical, and because the preliminary findings of Jan van Franeker and his colleagues are already striking and suggestive. Compared with the situation in The Netherlands, there is no similar monthly beached bird survey programme carried out at a national level in the UK – there is good coverage only in Shetland, Orkney and parts of northeast England. The international beached bird survey, a single survey carried out once a year in countries throughout western Europe, and co-ordinated in Britain by the RSPB, took place on 28th-29th February 2004, however, and it is to be hoped that a clearer picture of events in the UK will stem from that survey. As this issue goes to press, the effects of the wreck are apparent at least as far north as southern Norway.

Northern Gannet thermalling

The note by John Stewart-Smith describing a thermalling Northern Gannet *Morus bassanus* (*Brit. Birds* 96: 252) prompted me to consult the notes I have gathered over many years on such flight behaviour. I can find only one reference to the species using thermals. Nelson (1997) mentioned ascent by Northern Gannets in thermals off Cape St Vincent, Portugal, and also suggested that this may have preceded a movement at higher altitude. Most marine thermals are not as organised as those initiated over the land and

are, therefore, unlikely to be used with any regularity. The use of thermals by gannets is thus probably confined to those initiated over the land and drifted over adjacent water by the wind flow. Nonetheless, frigatebirds *Fregata* use the thermals within Trade Wind systems (BWP) and, under certain conditions, gulls *Larus* utilise marine thermals and may even be able to initiate them themselves (Woodcock 1975; Haney & Lee 1994).

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Blackbird mimicking exotic birds

Blackbird *Turdus merula* is a common resident and migrant species in The Channel Islands. Several pairs nest each year in the varied habitats of the Jersey Zoo grounds, males typically singing from perches, particularly at dawn and dusk. Many species of exotic birds which are maintained in the aviaries and open enclosures at the Zoo also vocalise principally during these periods of the day.

In 2002, one particular male Blackbird maintained a territory in a lightly wooded area at the western end of the Zoo, in the valley of a small stream. This male sang from several regular perches, including an exposed dead branch at the top of a tall tree. His evening song was highly distinctive, in part because of the use, throughout the year, of short repeated phrases in a style reminiscent of Song Thrush *T.*

philomelos; and in part because of his mimicry of several species of the Zoo's exotic birds. The species mimicked were easily identifiable and songs were tape-recorded over several nights.

Songs daily included the harsh calls of St Lucia Parrot *Amazona versicolor* and the decrescendo calls of female Madagascan Teal *Anas bernieri*, birds which were housed in or close to the Blackbird's territory and which called predominantly at dawn and dusk respectively. Phrases from the more melodic songs of Black Bulbul *Hypsipetes leucocephalus* and White-crowned Robin-chat *Cossypha albicapilla* were also used regularly. Another distinctive component of the song, even when the Blackbird sang from high perches, was a call otherwise normally given by the species when flushed or during chases ('mildly alarmed or surprised': *BWP*).

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EDITORIAL COMMENT Although mimicry of many different bird species has been recorded before in Blackbirds, this is typically delivered 'sotto voce and passes unnoticed' (*BWP*); the variety, and the delivery, described here is unusual.

Unusual breeding behaviour by Blackbirds

At 08.00 hours on 8th May 2002, at Upper Bucklebury, West Berkshire, my attention was drawn towards the sound of several Blackbirds *Turdus merula* calling loudly from a hedgerow. Shortly afterwards, a female, followed by two adult males, flew down from the hedgerow and alighted in full view on top of a low brick wall, the males perching either side of her. One of the males then flew up to the female and copulated with her before returning to perch on the wall. Almost immediately, the second male flew to the female and also copulated with her before he too resumed his original position on the wall. The female then flew back up into the hedgerow followed by both males, and all three

birds subsequently left the area.

The Blackbird is a common and well-studied species and the above observation would appear to be of interest in several respects, especially when compared with the information contained in *BWP* (Vol. 5). First, *BWP* states that the Blackbird has a monogamous mating system, although a few cases of bigamy have been recorded; second, that copulation is rarely seen, even though Blackbirds are abundant in suburban areas; and third, that this species is territorial, with intruding birds usually being chased off. At no time during the above observation did either male show any antagonistic behaviour towards the other.

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News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

UK ratifies albatross treaty

The UK Government and three of its Overseas Territories have ratified the Agreement on the Conservation of Albatrosses and Petrels (ACAP), a major step forward in the campaign to save the world's 21 albatross (*Diomedidae*) species from extinction. The UK is a late signatory to ACAP, which came into force on 1st February 2004, and has joined following ratification by Australia, New Zealand, Ecuador, Spain and South Africa. The decision by the UK and the Falklands, British Antarctic Territory and South Georgia/South Sandwich Islands to endorse the agreement means that the UK will take measures to reduce the 300,000 annual seabird deaths resulting from the activities of the longline fishing industry. In addition, ACAP will address the destruction of important breeding and feeding areas, pollution, and disease in seabird colonies.

Now the RSPB will lobby ministers to extend ratification to include the last key UK Overseas Territory, Tristan da Cunha. Ratification by Tristan da Cunha is vital as just 9,000 Tristan Albatrosses

Diomedea dabbenena remain. The Spectacled Petrel *Procellaria conspicillata* is also restricted to Tristan, where the entire world population of fewer than 10,000 birds breeds on just one small island. With up to 700 killed annually by Brazilian longline fisheries, this species is classed as Critically Endangered by the IUCN (World Conservation Union).

Euan Dunn, Head of Marine Policy at the RSPB, said: 'Not just Tristan, but all the nations into whose waters these species range must urgently ratify the treaty if we

are to prevent extinctions. The strength of the treaty is in its international co-operation to protect seabirds, which cross oceanic boundaries at will... UK ratification is welcome and timely news, and a hugely significant breakthrough in our battle to prevent albatross extinctions.'

There is still time to sign the Save the Albatross petition, calling for action against pirate longline fishing, which is to be presented to the United Nations in June (see *Brit. Birds* 96: 662).



Robin Chittenden

143. Black-browed Albatross *Thalassarche melanophrys*, South Africa.

Seabird 2000 results published

The importance of the UK's seabird populations was highlighted with the recent publication of the results of Seabird 2000. This latest assessment of the seabird populations of the UK, the Republic of Ireland, the Isle of Man and the Channel Islands shows that numbers of our 25 breeding species have risen steadily over the last 30 years to approximately eight million individuals today.

Launched at the eighth International Seabird Group Conference in Aberdeen, the results of the Seabird 2000 census represent the work of more than 1,000 sur-

veyors, counting 3,200 seabird colonies along 40,000 km of coastline and at 900 inland sites between 1998 and 2002. Their findings establish that the UK supports 90% of the world's breeding Manx Shearwaters *Puffinus puffinus*, 60% of the global population of Great Skuas *Stercorarius skua* and an estimated 68% of the world's breeding Northern Gannets *Morus bassanus*. In Scotland, breeding seabirds (5.2 million) outnumber people (5.1 million at the 2001 census).

The survey also revealed, however, that some seabirds, particularly several species of terns

Sterna, are suffering considerable population declines. Since the mid-1980s, there has been a decline in the numbers of three of the five breeding tern species, probably as a result of large-scale industrial fishing of their sandeel *Ammodytes* prey. Sandeel shortages have also been a major factor in the population declines of Arctic Skuas *Stercorarius parasiticus* (down 37%), Kittiwakes *Rissa tridactyla* (down 23%) and Shags *Phalacrocorax aristotelis* (down 25%), over the past 15 years.

Link: Seabird 2000

(www.jncc.gov.uk/seabird2000).

All GM crops weeded out

Opponents of genetically modified crops celebrated a hat trick when the German biotech company Bayer withdrew its licence application to grow GM maize in the UK. This follows the denial of Government licences for GM oilseed rape and sugar beet following the three-year Farm Scale Evaluations (FSEs) of those crops (*Brit. Birds* 96: 662). The use of 'broad spectrum' herbicides – in conjunction with oilseed rape and sugar beet plants genetically manipulated to resist the pesticides – wiped out weeds and created monocultures hostile to bees, butterflies and seed-eating birds dependent on weed seeds. Modelling studies on the sugar beet trial suggested that there would be a rapid decline of Sky Larks *Alauda arvensis* if there was

widespread planting of GM beet, leading to extinction within 20 years.

But GM herbicide-tolerant maize emerged from the FSEs as better for wildlife than conventionally grown maize, with more weeds surviving around the crop. The pesticide used in the trial, Atrazine, is, however, now banned by the EU, raising a question mark over the validity of the results. Nevertheless, the Department for Environment, Food and Rural Affairs (Defra) granted Bayer permission to market GM maize in the UK. Just three weeks later, however, Bayer snubbed that offer and said that although it was committed to growing GM crops in Britain, none are likely to be planted until at least 2008.

There are no other experimental GM crop trials planned in this country, so Bayer's decision is seen as a serious setback to the GM industry, and a major victory for the anti-GM lobby. 'This is the death-knell in the short term for GM crops in Britain. The only GM crop with a Government green light now doesn't even have the support of its manufacturer,' said a Greenpeace spokesman. Bayer did not elaborate on why it has pulled out of selling GM maize at this time. One possible explanation is that its crop, Chardon LL, may be outdated already. Then there is the commercial uncertainty over who should compensate organic or conventional farmers for the genetic contamination of their fields by neighbouring GM crops.

People who live in glass houses

BTO researchers have estimated that an astonishing 100 million birds may collide with windows in the UK every year. A third of these die as a result, amounting to 33 million preventable bird deaths each year. In order to find out more about the impact (quite literally) windows are having on garden bird populations, the BTO is running a Window Strikes Survey from now until the end of August. Mike Toms, the survey co-ordinator, said: 'This is a staggering number of birds that are being lost each year, and many are of species that we know are already in trouble. We are particularly interested in reports of Song Thrushes [*Turdus philomelos*] flying into windows because this is a declining species and one for which gardens are particularly important.'

The only information we have at the moment concerning the potential effects of window strikes on birds comes from the BTO's National Ringing Scheme. Of approximately 11,000 ringed birds reported to the BTO every year, half have been found dead. Where the cause of death is known, 7% of Song Thrushes and 3% of House Sparrows *Passer domesticus* (both of which are 'Red List' species) had died after flying into windows. Corresponding figures for other species include: Common Chaffinch *Fringilla coelebs* 20%, Greenfinch *Carduelis chloris* 9%, Blackbird *Turdus merula* 7% and Robin *Erithacus rubecula* 4%. A third of all Eurasian Sparrowhawks *Accipiter nisus* for which a cause of death was reported had collided with windows.

One way to reduce this carnage might be a resumption of the window tax imposed on *nouveau riche* castle owners in the Middle Ages, which should result in a reduction in the acreage of glass used in our homes and offices. More realistically, special window stickers shaped like a bird of prey, known as sentinels, do help to prevent window strikes (but do they warn off Eurasian Sparrowhawks?) and are available in two different forms. The 'red' sentinel is often used where birds can see a reflection of the garden in the window, while the 'black' sentinel is used where birds can see through a room because of a window on the other side. If you wish to participate in the survey, you can request a free recording pack by writing to: Window Strikes Survey, BTO, FREEPOST, Norfolk IP24 2BR. Alternatively, telephone the BTO on 01842 750050, or e-mail: gbw@bto.org

A plague of pratincoles?

Until this year, the world population of Oriental Pratincoles *Glareola maldivarum* in the East Asian-Australasian Flyway was estimated at approximately 67,000 birds. Then, in February 2004, huge flocks were discovered in the region of Anna Plains, Western Australia. These unprecedented numbers appeared in a region where small numbers regularly occur in most years. A hurriedly organised aerial survey carried out by the Australasian Wader Study Group (AWSG) revealed a much larger population than was ever imagined: 2.5 million birds! Just where these birds normally winter and why they concentrated in this region in 2004 remains a mystery. The AWSG and its flyway colleagues are now poised to begin extensive research throughout the Asia-Pacific Flyway, extending from far eastern Russia, through a number of east Asian countries, to some of the least-known areas of Australasia.

Link: Australasian Wader Study Group

www.tasweb.com.au/aws/index.htm

Italian hunters gunning for the Birds Directive

The Italian bird protection society LIPU (Lega Italiana Protezione Uccelli) hopes to gather 100,000 signatures on a petition against plans to dramatically weaken bird protection in Italy. In the 25th anniversary year of the EU Birds Directive, the Italian Government has made 15 proposals, including lengthening of the hunting season and decriminalising certain hunting crimes, such as the killing of birds of prey, in direct contravention of the Birds Directive.

In 1998, a petition organised by the Ligue pour la Protection des Oiseaux in France against the long French hunting season collected 2.2 million signatures from across Europe and, in July 2002, France introduced a law which established a hunting season that did not overlap significantly with the spring migration or breeding seasons of any species.

The LIPU petition will be delivered to Prime Minister Berlusconi, Agriculture Minister Alemanno, and Head of State Ciampi in September, at the beginning of the hunting season. To sign it, visit the LIPU UK website.

Link: LIPU UK (www.lipu-uk.org).

IOC in Hamburg 2006

The 24th International Ornithological Congress takes place on 13th-19th August 2006. The Scientific Programme Committee is inviting submissions for symposium proposals. Symposia are aimed at the general ornithologist and will provide up-to-date coverage of current ornithological research. Each symposium will include five speakers; two of these will be invited by the conveners to provide keynote addresses which summarise the global progress of ornithological science in the field over the last four years and address priorities for future research. You can register for the congress on the IOC website (www.i-o-c.org).

Birdfair update

The 2004 British Birdwatching Fair at Rutland Water is to be dedicated to saving Peru's dry forests, specifically the endemic-rich Tumbesian region of northwest Peru on the western slope of the Andes. This is the third time in six years that funds raised by the Birdfair have been designated for threatened birds in the Neotropics, following fundraising for Brazil's Atlantic forests in 1999 and eastern Cuba in 2001.

Last year's Birdfair raised £157,000 for BirdLife International's Saving Madagascar's Wetlands project, and the cheque was presented to the Malagasy representative at the BirdLife world conference in Durban, South Africa, in March. The conference also marked BirdLife's 10th anniversary, and the organisation used the occasion to commit itself to a tough new strategy that would improve the status of the world's 10,000 bird species, including the 1,211 currently designated as 'Threatened', by 2015.

In the past decade, BirdLife scientists have identified more than 9,200 sites of vital importance for birds and other wildlife through its Important Bird Area (IBA) programme. Within this period, BirdLife has lobbied and facilitated legally binding protection for more than 2,000 of these IBAs.

Bon viveurs gather in Nantes

The Colloque Francophone d'Ornithologie, organised by the Ligue pour la Protection des Oiseaux de la Loire Atlantique, will take place in Nantes on 9th-10th October. An annual reunion for French-speaking ornithologists from around the world, it features a mixture of talks and field trips in and around Nantes, and is open to all birders. If you live to eat, the meals are good, and so is the accommodation. This is a convenient location for UK birders and not too expensive for a good birding weekend with continental specialists. (Contributed by Bertram Bree)

Link: Ligue pour la Protection des Oiseaux 44 (Loire Atlantique) (http://lpo44.free.fr/index_800.php).

Alec Zino 1916-2004

The man who did so much to ensure the survival of Europe's rarest breeding bird, which bears his name, has died aged 88. Alec Zino discovered the colony of Zino's Petrels *Pterodroma madeira* in 1969, in the central massif of Madeira. He had suspected that a gadfly petrel still nested on the island and played tapes of Fea's Petrel *Pterodroma feae* from the neighbouring Desertas Islands to Madeiran shepherds. They had heard these eerie calls before and led him to 'the ghost of the mountains' in the Pico do Areeiro. Some shepherds abseiled 100 m down the precipitous mountain-side and found nest burrows and incubating birds.

Studies of the birds by Alec and his son Frank established that these were smaller and lighter than the *Pterodroma* of the Desertas and Cape Verde. Subsequent DNA analysis in the 1990s confirmed their specific distinction. But just as these birds lived on precipitous mountain slopes, so too was their population on the edge of a precipice. In 1991, cats killed ten adult petrels – perhaps a quarter of the world population. Subsequent control of cats and rats, together with designation of the Madeira Natural Park, has helped bring Zino's Petrel back from the brink. The latest news from Madeira (*Brit. Birds* 96: 529) is that a new colony of Zino's Petrels has been discovered in the central mountains and the global population is now believed to number 45 pairs. This new colony, with at least nine occupied nests, produced 20 young birds in 2003. The species' long-term survival – and that of several other endangered seabirds – can be attributed to the unceasing efforts of Alec Zino and his family.

A full obituary will appear in *British Birds* shortly.

Lesser White-fronts in Cyprus

Following the report of 52 Lesser White-fronted Geese *Anser erythropus* in Greece in January 2004 (*Brit. Birds* 97: 152), apparently representing the entire natural European breeding population, Chris Lamsdell has written with news from Cyprus. He comments: 'In November 2003, three Lesser White-fronts arrived at Akhna Dam, representing the first-ever record for Cyprus. These birds were believed to have originated from the wintering grounds in Greece. The birds remained into 2004, but gradually reduced to two birds and finally to just one, which was last seen in early March. Though this is a no-hunting area, it is believed that the birds may well have been illegally shot. This represents a loss of 5% of the European population, and if they have been shot as suspected, a sad end to the first occurrence of the species in Cyprus.'

BirdLife Cyprus was formed last year with the amalgamation of the two Cyprus Ornithological Societies (1957 and 1970 Societies). Since formation, three permanent staff have been employed and work at the Strakka office in Nicosia, along with seasonal staff, through the financial support of RSPB, BirdLife International and the Leventis Foundation. The major projects currently being undertaken are a study of birds and farming as agricultural intensification looms following EU membership; assessing Important Bird Areas in Cyprus; investigating illegal bird trapping and monitoring compliance with bird protection legislation after accession to the EU on 1st May 2004.

BirdLife Cyprus needs support from members not only within Cyprus but also in the UK and elsewhere in Europe. Single membership is £20.00.

Link: BirdLife Cyprus (www.birdlifecyprus.org).

North Cyprus birds

And for news from Turkish-occupied northern Cyprus, visit the North Cyprus Birds website. North Cyprus Birds was established in 1999, since when it has been regularly enlarged and improved. The site includes pages on: KUSKOR (the Turkish Cypriot bird protection society); recent and historical bird records; birdwatching sites; where to find Cyprus specialities; trip reports; the Cyprus birding year; Cyprus endemic birds; the North Cyprus Bird Reports; the North Cyprus Bird Ringing Scheme; and the Cyprus checklist (in English, German and Turkish).

Depending on the outcome of a unification referendum planned for late April, the Turkish and Greek Cypriot communities may reunify, with northern Cyprus also joining the EU on 1st May. Ultimately, this may lead to increased bird protection throughout the island, although perhaps not for many years.

Link: North Cyprus Birds (www.northcyprusbirds.com).

The Eric Hosking Trust

The Eric Hosking Trust is seeking applications for its 2004 bursary to sponsor ornithological research through the media of writing, photography or illustration. Bursaries of up to £500 are awarded by the Trust, set up in the memory of the legendary bird photographer. The closing date for applications is 30th September 2004. In 2003, the Trust awarded two bursaries: one to Colin Antwis to produce an exhibition of finger-point bird paintings that can be understood by touch as well as by sight, and the other to David Chandler at the RSPB to support the Phoenix Young Birders programme. An exhibition is planned for January 2005 to showcase the work of the Trust and to exhibit some classic black-and-white photographs by Eric.

Positive legacy of foot and mouth

Three years ago, the English and Welsh countryside was closed for the spring and summer as millions of sheep and cattle were slaughtered to halt the spread of foot-and-mouth disease (FMD). The hardest-hit county was Cumbria, and when restocking started in the autumn of 2001, the RSPB set out to encourage wildlife-friendly farming as the county's farmers planned for the future.

The Cumbria Lowland Farmland Bird Project has now been wound up but it is set to bring around £7 million in environmental grants to the county over the next 10 years. Will Cleasby, who was personally affected by FMD when his family's farm near Penrith lost all its livestock, managed the project and worked with hundreds of farmers in the north and west of the county to encourage wildlife habitat creation and help them apply for grant aid. The grants, from Defra's Countryside Stewardship Scheme, will help farmers to create and restore wildlife habitats in Cumbria that will benefit declining farmland birds such as Northern Lapwing *Vanellus vanellus*, Tree Sparrow *Passer montanus*, and Grey Partridge *Perdix perdix*.

Will explains: 'With around 2,000 farmers in Cumbria losing livestock as a result of FMD, there was a big economic, social and environmental mountain to climb in the aftermath of the outbreak. Many farmers took the opportunity to move away from intensive farming and look at new directions for their businesses. This project has helped by giving them practical advice, assisting them in applying to agri-environment schemes, and equipping farmers and their advisors with new skills.'



Monthly Marathon

Photo no. 205: White-rumped Sandpiper

If you are one of those people who take a regular interest in this feature, you may well have experienced a feeling of déjà vu upon seeing photo number 205 (*Brit. Birds* 97: plate 53, repeated here as plate 144). 'Haven't we had this species quite recently in this competition? Yes, I'm sure I've seen that headlessness before, somewhere...' There is, however, nothing in the rules to prevent the same species featuring more than once in this competition, although I am sure there must be an abundance of suitable photographs out there of species that have yet to make an appearance in the Monthly Marathon series. It would help me greatly (having typically left the preparation of this solution to the very last minute) if I could just refer you to the solution to the twenty-first stage in the eleventh Monthly Marathon (*Brit. Birds* 94: 97-98). This would, however, be a great disservice since every photo deserves to be analysed individually, a point that is so often not



Richard Chandler

144. White-rumped Sandpiper *Calidris fuscicollis*,
Florida, USA, September 2002.

understood by authors of identification guides that rely on photographic illustration.

Let me make a stab at explaining what I can see in this particular photograph. I think it is fairly obvious that we are looking at a smallish wader, one that is approximately the size of a Dunlin *Calidris alpina* or Little Stint *C. minuta*. That doesn't narrow the field down much, but if we accept that the legs are dark, which,

admittedly, is an ambiguous point in this photo, at least it's a start. Those familiar with this group may well have identified the bird instantly, instinctively homing in on its rather distinctive structure with noticeably attenuated rear-end. The more systematic approach, however, requires us to try to age the bird, as this is often a crucial first step in the identification of potentially tricky small shorebirds. I must admit that for a few minutes I struggled to interpret the plumage of this individual, but I think that is because, for some reason, I had got it into my head that it was photographed in the spring. A detailed, clear-headed analysis suggests it is a first-winter bird, presumably photographed during the autumn. Careful examination of the wing-coverts and tertials shows these to appear equally worn, in contrast to the mostly fresh, round-tipped scapulars, a combination typical of many *Calidris* in their first autumn. The two distinctly dark-centred and white-fringed rear scapulars are a slightly different shape from the feathers both in front and behind, suggesting that they are retained juvenile feathers. Interestingly, some of the freshly moulted winter-type scapulars show extensive dark centres while others have just the usual thin, dark shaft-



145. 'Monthly Marathon'. Photo no. 208. Sixth stage in thirteenth 'Marathon'. Identify the species. Read the rules (see page 54), then send in your answer on a postcard to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, or by e-mail to editor@britishbirds.co.uk, to arrive by 30th June 2004.

streak. This is something that I have noticed on two species in particular, Little Stint and White-rumped Sandpiper *C. fuscicollis*. In the former, it can provide a useful means of separation from the very similar Red-necked Stint *C. ruficollis* and Semipalmated Sandpiper *C. pusilla*. In the latter, such plumage details are more incidental, since identification is never really that much of a problem but, nevertheless, their presence here reinforces the initial impression of a White-rumped Sandpiper.

Furthermore, our mystery bird appears to have long wings, giving it a distinctly attenuated look. Of course, White-rumped is not the only species of small shorebird with such long wings: Baird's Sandpiper *C. bairdii* shows a similarly long projection of the primaries beyond the tail tip, and

separating these two species in juvenile plumage, at long range or in poor light, can be surprisingly difficult at times. The overall grey-ness of our bird, combined with the scatter of fine streaks along the flanks, eliminates Baird's immediately, and allows us to confidently conclude that it is, indeed, a White-rumped Sandpiper. This bird was photographed in Florida in September 2002 by Richard Chandler and I hope it is the last White-rumped Sandpiper we see in this competition for a while; but you never know what the Editor may decide!

Killian Mullarney

It seems that most readers did indeed remember what they learned from Killian three years ago (*Brit. Birds* 94: 97-98), since

82% identified this White-rumped Sandpiper correctly (the remaining votes being for closely related Calidrids). We now have a leader board of just six at this relatively early stage of the twelfth 'Marathon', although with just three rounds gone there is everything to play for. And the Editor promises not to include any more White-rumped Sandpipers in the pool of photos from which the SUNBIRD team choose the mystery birds!

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Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers mid March to mid April 2004.

Redhead *Aythya americana* Llanilid, 9th-13th March, same Lisvan Reservoir (both Glamorgan), 18th March. **Lesser Scaup** *Aythya affinis* Suffolk Water Park (Suffolk), 16th March; Abbotsbury (Dorset), 17th March; Exminster Marshes (Devon), the long-staying bird remained until at least 8th April. **Harlequin Duck** *Histrionicus histrionicus* Lewis (Western Isles), relocated and still present 8th April. **White-billed Diver** *Gavia adamsii* Bluemull Sound (Shetland), 23rd March; Sallachan Point (Highland), 24th March.

Glossy Ibis *Plegadis falcinellus* Bowling Green Marsh (Devon), long-stayer to 8th April at least. **American Coot** *Fulica americana* Loch of Clickimin (Shetland), long-stayer to 5th April; South Uist (Western Isles), long-stayer to 7th April. **White-tailed Eagle** *Haliaeetus albicilla* North Ronaldsay (Orkney), 18th March. **Kentish Plover** *Charadrius alexandrinus* Male, Hickling Broad (Norfolk), 1st April. **Lesser Yel-**

lowlegs *Tringa flavipes* Hayle Estuary (Cornwall), long-stayer to 8th April at least. **Long-billed Dowitcher** *Limnodromus scolopaceus* Bothal Pond (Northumberland), 6th April. **Franklin's Gull** *Larus pipixcan* St Mary's (Scilly), 11th-12th March, same Radipole (Dorset), 16th March to 2nd April. **Bonaparte's Gull** *Larus philadelphia* Marazion, 12th-14th March, same Hayle Estuary (both Cornwall), also 14th March; South Uist (Western Isles), 31st March until at least 8th April. **Herring Gull** *Larus argentatus* of North American race *smithsonianus* Separate first-winters remained until early April, one at Nimmo's Pier (Co. Galway), and another at Burtonport and Killybegs (both Co. Donegal). **Forster's Tern** *Sterna forsteri* Two at Kinvarra (Co. Galway), 19th March; one Groomsport (Co. Down), 27th March.

Oriental Turtle Dove *Streptopelia orientalis* The long-staying bird at St John's Loch, near Thurso (Highland), was seen on 6th and 31st March. **Snowy Owl** *Bubo scandiacus* The wintering male was relocated on South Uist (Western Isles) on



Rebecca Nason



Rebecca Nason

146 & 147. First-winter Franklin's Gull *Larus pipixcan*, Radipole Lake, Dorset, March 2004.

31st March, and was still present until at least 4th April. An early influx of **Alpine Swifts** *Apus melba* included long-staying birds at Scarborough (North Yorkshire), 14th March until at least 8th April, and Winchester (Hampshire), 17th-18th March, moving to nearby Abbotsworthy (Hampshire), 18th-22nd March. Other records include short-stayers at Marazion (Cornwall), 14th March; Knaresborough (North Yorkshire), 15th March; Cley (Norfolk), 19th March; Oxford (Oxfordshire), 24th March; Hengistbury Head (Dorset), 30th March; Minsmere (Suffolk), 4th April. **Red-rumped Swallow** *Hirundo daurica* Newcastle (Co. Wicklow), 19th-

20th March; Swithland Reservoir (Leicestershire), 22nd-29th March; Cosmeston Lakes (Glamorgan) 5th April; two, Hay-a-Park gravel-pits (North Yorkshire), 7th-8th April. Female **Bluethroat** *Luscinia svecica*, Church Norton (West Sussex), 4th-5th April, the early date suggesting that it was likely to be of the white-spotted form *cyaneola*.

Yellow-browed Warbler *Phylloscopus inornatus* Cork City (Co. Cork), 2nd-4th April. **Hume's Warbler** *Phylloscopus humei* The wintering bird at Hook Head (Co. Wexford) was present until at least 20th March. **Dusky Warbler** *Phylloscopus*

Phil Palmer



148. Alpine Swift *Apus melba*, Scarborough, North Yorkshire, March 2004.

Mike Malpass



149. Red-rumped Swallow *Hirundo daurica*, Hay-a-Park gravel-pits, North Yorkshire, April 2004.

Graham Catley



150. Yellow-browed Warbler *Phylloscopus inornatus*, Louth, Lincolnshire, March 2004. This bird represents the first non-autumn occurrence for the county.

fuscatus Paignton (Devon), long-stayer to 8th April at least; Royal Portbury Dock (Somerset), long-stayer until 8th April at least. **Penduline Tit** *Remiz pendulinus* Clennon Valley (Devon), 21st-22nd March; Lodmoor (Dorset), 22nd and 26th March. **European Serin** *Serinus serinus* St Mary's, 21st-31st March; St Agnes (Scilly), 28th March; Tresco, 2nd and 4th April; Foreland (Isle of Wight), 28th March; Brownsea Island (Dorset), 4th April. **Parrot Crossbill** *Loxia pytyopsittacus* Margate (Kent), 17th March.

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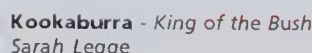
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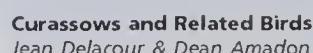
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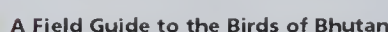
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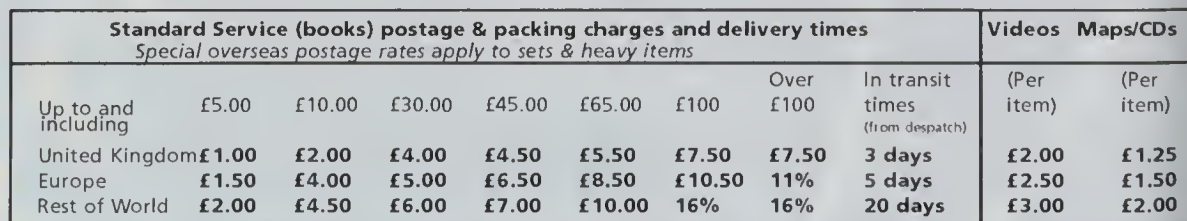
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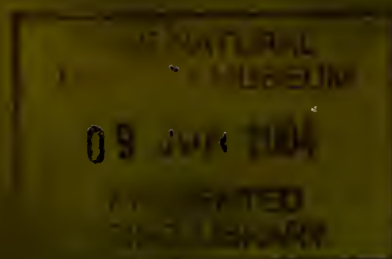
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British Birds

June 2004 Vol.97 No.6



Hybrid gull resembling Franklin's Gull

Snowy Egret: new to Britain

species limits in *Acrocephalus* and *Hippolais* warblers



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What does the British Birds Rarities Committee do?

While this may seem an extraordinary question, it was one of the major agenda items during the 2004 BBRC Annual Business Meeting, held at Dungeness Bird Observatory, in Kent, in February. We feel that a debate on our remit will help with some of the increasingly complex decisions we now have to make. These range from general issues such as how to manage our workload and how to assess rare subspecies in a time of constant taxonomic change, through to specific questions such as how we should treat records of Pine Buntings *Emberiza leucocephalos* which show some minimal yellow tones in the outer webs of the primaries. These are examples of the changing world of record assessment in which the BBRC operates, and a clarification of purpose is timely.

Table 1. The aims and objectives of the BBRC.

BBRC aims to maintain an accurate database of records of the occurrence of rare taxa in Britain, in order to enable individuals or organisations to assess the current status of, and any changes in, the patterns of occurrence and distribution of these taxa in Britain.

To support this aim, BBRC will strive to:

- work closely with County Recorders, Bird Observatories and observers to ensure that all records of rare taxa are submitted to this database;
- provide interested parties with an accurate and complete annual report detailing records of rare taxa in Britain;
- continue to vet all records of rare taxa in an independent, open, rigorous and consistent manner, and to provide observers with feedback on the assessment process as appropriate;
- continue to develop and publish criteria for the identification of rare taxa and to provide relevant information to other observers who wish to do this in partnership with the Committee.

As part of the process of reviewing our constitution, we re-examined our aims and thus developed a series of objectives; but even these will need refinement as we test them against current issues. This short article sets out our present philosophy and invites feedback which we can consider in the development of our constitution. Table 1 presents the aims and core objectives of BBRC. In addition, we have a series of other roles including, for example, assisting county committees in the compilation of local avifaunas by undertaking reviews, where requested, of post-1950 records to ensure the accuracy of both the avifauna and our database.

Although our key aims and objectives seem reasonably straightforward, they suggest that there is clear agreement about what constitutes 'rare birds' or rather, to use the term given in Table 1, 'rare taxa'. This is not necessarily the case and some working principles are essential. The rest of this article discusses three specific points:

1. Why do we use the term 'rare taxa' rather than 'rare birds'?
2. What do we mean by 'taxa'?
3. What do we mean by 'rare'?

1. Why do we use the term 'rare taxa' rather than 'rare birds'?

Of the three, this question is undoubtedly the easiest to answer. Put simply, it is because we are interested in groups of birds, whether species or subspecies, which are vagrants to this country – rather than rare plumage or structural variations in common birds, which have no geographical relevance. For example, xanthochromic Wood Warblers *Phylloscopus sibilatrix* are a rare plumage variant in which the warbler is almost entirely yellow. This variant is reported in Britain less frequently than, for example, Radde's Warbler *P. schwarzi* but, as it occurs sporadically throughout the

09 JUN 2004

range of Wood Warbler and has nothing to do with vagrancy, it is not a matter of concern for BBRC.

2. What do we mean by 'taxa'?

The lumping and splitting debates, with which we are all currently familiar, reflect a much wider discussion about species concepts, and are relevant not only to birds but throughout the biological world. As we are interested in geographical vagrancy, it seems sensible for us to consider both species and subspecies which occur as vagrants in Britain. Historically, this coverage has not been complete, so that BBRC has considered some rare subspecies but not others. Problems can, however, arise when subspecies (or races – we take these terms to be interchangeable) are elevated to species status. For example, BBRC has traditionally assessed records of 'Siberian Stonechat' *Saxicola torquatus maura* so that it would be easy to sort out its status should it ever be split from Common Stonechat. This was not true of Hume's Warbler *P. humei*, and so when it was separated from Yellow-browed Warbler *P. inornatus*, our knowledge of its historical status in Britain was incomplete.

Because the debate on what is or is not a species is largely irrelevant when considering vagrancy, we feel that we should consider all diagnosable taxa that meet our statistical criteria of rarity. In this situation, it becomes unimportant whether a taxon is presently considered to be a species or a subspecies. Although it may seem like dodging the arguments, the debate about whether or not to split is not the concern of BBRC; our role is confined to assessing whether we can be sure that a bird is of the taxon being claimed. The critical thing to us is not whether it is a species but whether we can *identify* it – whether it is *diagnosable*. Even here we face a problem of exactly how we define diagnosability, as it is clear that there are many described subspecies which are not universally recognised by the relevant authorities. In some cases, it is evident that at least one age- or sex-class of a subspecies is consistently diagnosable on present knowledge, while the identification of other forms is currently evolving or being tested. It is equally clear, however, that some subspecies merely represent a cline (or clines) across a species' range, or that the subspecies are poorly differentiated. It is the first two cases (those in which

identification is clearly possible, or is being developed) that BBRC is interested in and we will continue to work with the BOURC and the birdwatching public to establish whether subspecies are consistently diagnosable and, if so, to clarify what the relevant identification features are.

3. What do we mean by 'rare'?

This is another difficult question to answer. BBRC aims to record the status of rarities in Britain and has guidelines for determining the statistical threshold at which a taxon might no longer be considered rare. Although we do not always apply them to the letter, because there are a range of complicating factors that need to be considered, these guidelines are the starting point for every decision about what we consider. They are that:

- (a) there should have been at least 150 records in the previous ten years; and
- (b) there should have been more than ten records in at least eight of the previous ten years.

Point (b) is necessary to prevent eruptive species, such as Arctic Redpoll *Carduelis hornemanni*, being dropped from the BBRC list – in most years these are genuinely rare, but occasionally they might comfortably pass the ten-year numerical threshold in a single year! Perhaps the real debate is whether we judge our statistical requirements by prevalence – the *total* number of records in a year – as opposed to incidence – the number of *new* individuals in a year (i.e. excluding remaining or returning birds)?

Incidence tells us about vagrancy patterns, while prevalence best reflects birders' perceptions of how rare a species is in Britain. With some species and records it is easy to decide whether to use incidence or prevalence (see box 1), but in others the information we use to make important decisions on status and, indeed, whether BBRC continues to consider a species, is little more than guesswork (see box 2 and box 3). There are good arguments for the use of both incidence and prevalence, but in deciding between the two we should also remember that returning or wandering individuals allow birders to become more familiar with a taxon. Previous experience is a factor in the assessment process as it undoubtedly helps people to find and identify further individuals.

Box 1. BBRC tends to make an assumption that a first-year bird seen in one winter is probably the same individual as an older bird returning to the same location the following winter. Such assumptions are comparatively safe when considering species which are both rare *and* readily aged in the field – rare gulls are a prime example.



151. Laughing Gull *Larus atricilla*, Cley, Norfolk, June 1999. Reston Kilgour

In a nutshell, BBRC is trying to determine which forms are diagnosable; the criteria that we consider necessary to identify them; and whether they are rarities.

In the next few years, BBRC will continue to clarify which rare taxa are diagnosable, and what criteria should be used to determine their rarity. As appropriate, we will then request and assess records of such birds. From this we may find that, for example, there are more than ten records per year of 'Black-bellied Dipper' *Cinclus c. cinclus*; if so, then it does not fulfil our criteria as a rarity, and it is most appropriate for it to continue to be handled by county committees. We may well find that 'white-headed' Long-tailed Tits *Aegithalos caudatus* are rarer than (say) Penduline Tits *Remiz pendulinus* and should thus be assessed by BBRC. Given the fact that BBRC can assess only a finite number of records a year, how would you, the birding public, respond if we adopted a lower threshold of occurrence when deciding whether or not a taxon should be considered rare? How would you react if we proposed that species such as Radde's Warbler and Olive-backed Pipit *Anthus hodgsoni* were dropped from the rarities report in favour of rarer subspecies?

BBRC will continue to work through these issues in a consistent and pragmatic way, but we

Box 2. BBRC has perhaps more problems with the statistics of 'Black Brant' *Branta bernicla nigricans* than it does with any other bird. We are aware of series of records in areas such as north Norfolk or Hampshire that we believe may relate to returning individuals, but establishing these patterns of occurrence is fraught with difficulties. For example, there may be up to seven individuals in the Lincolnshire/Norfolk goose flocks. These flocks are mobile and move freely across the county boundary, and we are never really certain whether the Lincolnshire birds are different from the Norfolk birds and how many individuals are involved in any one year. Consequently, trying to make rational decisions about the number of returning individuals, and whether last year's first-years are this year's adults, is even less precise. Yet we try to use these very numbers to decide whether we should continue to consider 'Black Brant' as a rarity.



152. Black Brant *Branta bernicla nigricans* is responsible for causing the BBRC Statistician more headaches than any other taxon... This adult (left, with a pale-bellied Brent Goose *B. b. hrota*) was photographed in Poland in October 1998.

Photographer unknown

Box 3. Birds such as White Stork *Ciconia ciconia* present special problems. The combination of size, ease of identification, public familiarity and its predisposition for appearing in areas frequented by humans, means that an unusually large proportion of occurrences are reported, either by birders or the general public. While we can track some wandering individuals, other series of records could reflect multiple arrivals or a single individual. For this species, escaped individuals further complicate the situation. There has been a tendency to disregard any bird that is ringed as an escape, but recent records of birds ringed in France and appearing in Britain show that this is not always the case and, indeed, a high proportion of the (wild) Dutch population is ringed. How does BBRC decide whether the number of 'real' White Storks has dropped to such a level that we should reconsider the species as a rarity?



153. White Stork *Ciconia ciconia*, despatching Common Frog *Rana temporaria*, Hull, East Yorkshire, April 2001. Mike Ashforth

would welcome feedback on all of these matters. After all, if it were not for birders submitting records to be assessed, BBRC would not exist and we would not have a complete national archive detailing the status of rarities

in Britain. BBRC is a means to an end, not an end in itself. This is why our primary objective is to 'work closely with County Recorders, Bird Observatories and observers to ensure that all records of rare taxa are submitted...'

Colin Bradshaw, Paul Harvey & Jimmy Steele, on behalf of BBRC
c/o 9 Tynemouth Place, Tynemouth, Tyne & Wear NE30 4BJ



From the Rarities Committee's files:

Presumed hybrid gull resembling adult Franklin's Gull

Gary Pullan and John Martin

ABSTRACT A small gull in the evening roost at Boddington Reservoir, Northamptonshire, on 17th March 2001, was initially identified as a Franklin's Gull *Larus pipixcan*. Further observations on subsequent evenings revealed a number of anomalies that suggested it was of hybrid origin. Assisted by the cautious comments of the finders, BBRC concluded that it was indeed a hybrid, most probably between Mediterranean Gull *L. melanocephalus* and Common Gull *L. canus*. The fact that such a hybrid can closely resemble Franklin's Gull emphasises the requirement for careful and detailed notes when a suspected Franklin's Gull is found in Europe.

At 17.30 hrs on 17th March 2001, Gary Pullan (GP) found a small, dark-mantled gull with a partial 'hood' at Boddington Reservoir, Northamptonshire. It seemed to be about the size of a Black-headed Gull *Larus ridibundus* and showed obvious white spots on the black primaries, a white eye-ring and a rather short, dark bill. GP was sure that the bird was an adult Franklin's Gull *L. pipixcan*, a species he had seen previously in North Yorkshire in 1991 (*Brit. Birds* 86: 485). A few local birders managed to see the bird that evening, and it was subsequently seen by many observers each evening until 20th March, and again on 26th March. The following description, submitted to BBRC, is compiled mainly from GP's notes, with additional comments from M. R. Alibone (MRA) and Mick Ketley (MK).

Description

Size and structure

Quite dumpy and plump, especially around the breast, while the head consistently appeared rather small and rounded. The wings looked rounded when seen in flight briefly (it was never watched in the air for a prolonged period). At rest, on the water, the visible

primary tips created a blunt, rounded impression to the rear of the bird. The total length, from bill-tip to wing-tip, seemed comparable with Black-headed Gull, or slightly shorter. It therefore looked less attenuated and 'broader in the beam' than Black-headed Gull, and its posture on the water always appeared hunched, horizontal and rather flat. When watched preening vigorously on 26th March, its head appeared small and even more rounded, while the neck seemed thin and scrawny. It was rather inactive throughout its stay, rarely interacting with other gulls and, when the roost was disturbed, it was one of the last birds to take flight. [Structure close to that of Black-headed Gull, perhaps with a thicker neck, while the head appeared more rounded (MRA). Size as Black-headed Gull, or fractionally smaller (MRA); larger and bulkier than Black-headed Gull, it matched Common Gull *L. canus* in size (MK).]

Mantle colour

On 17th March, the mantle colour was noted as dark grey, much darker than on Common Gull, with obvious white scapular and tertial crescents, broader and more striking than Common, owing to the greater contrast with the mantle.

On subsequent evenings, the mantle tone looked closer to that of adult Common Gull, occasionally seeming slightly darker at some angles, but never paler than the Common Gulls present. Only one exceptionally dark Common Gull, present on 20th March, was conspicuously darker. [Mantle grey, like that of Common Gull, not darker (MRA). Exactly the same tone as Common Gulls on either side of it (MK).]

Wing pattern

The wings were strikingly patterned, both at rest and in flight. At rest, four large white spots on the tips of the folded primaries contrasted strongly with the black of the outer primaries. The spots on the two longest primaries appeared to merge into one larger spot on the folded wing. The tips to the inner primaries looked whitish enclosing a dark mark. On the open wing, the resulting impression was of a black area near the wing-tip surrounded by a white border (fig. 1). There was a striking white trailing edge along the whole of the upperwing. The underwing appeared whitish with an obvious white trailing edge and a pale dusky subterminal area, which merged with the off-white of the rest of the underwing. The black of the wing-tips was also visible below. [The exposed parts of visible primaries were black, each with a neat white tip. A white band separated the black of the primaries from the grey of the rest of the wing, this band appearing prominent and contrasting with the grey (MRA).]

Tail

The tail appeared white but was not seen well in flight.

Head pattern

A conspicuous black (not brown) partial hood extended from the crown to the level of the eye. This hood was incomplete and marked by two conspicuous areas of white feathering. The first of these crossed the loreal region and extended onto the fore-crown, although there was some black streaking on the forehead. The second was a narrow band of white feathering that extended from the eye up onto the crown. By 26th March, the hood had developed further, with dark feathering appearing on the loreal area and above the eye. An obvious white eye-ring was present, although this was broken in front and behind the eye. [Sides of head and crown black, but forehead was white (giving the impression of a 'black cap and earphones'); rear crown and upper nape also black. A few pencil flecks on the forehead, particularly around the 'join' between the top of the white forehead and start of black crown. White eye-lids were striking and obvious at long range, when those of Black-headed Gull were invisible (MRA). Head pattern superficially like that of a Franklin's Gull (MK).]

Bare parts

Bill short and straight, appearing quite thickset and blunt-tipped, marginally shorter than that

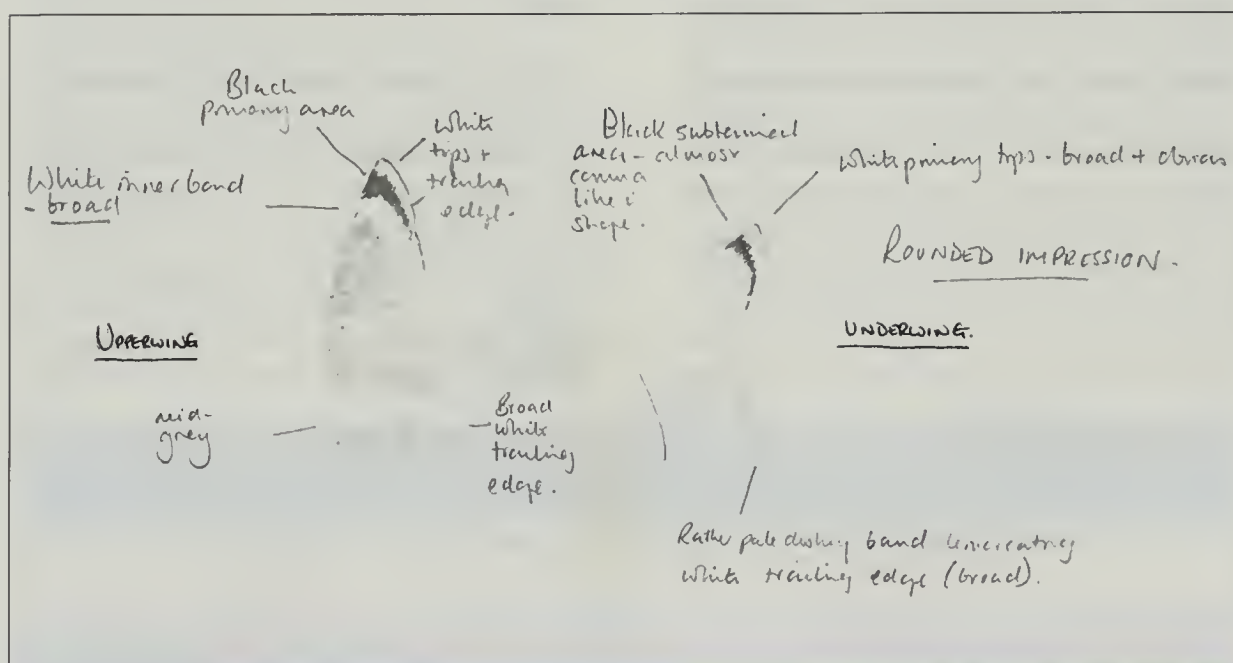


Fig. 1. The extent and distribution of black and white on the outer primaries of the Boddington gull created a pattern apparently identical to that of adult Franklin's Gull *Larus pipixcan*.

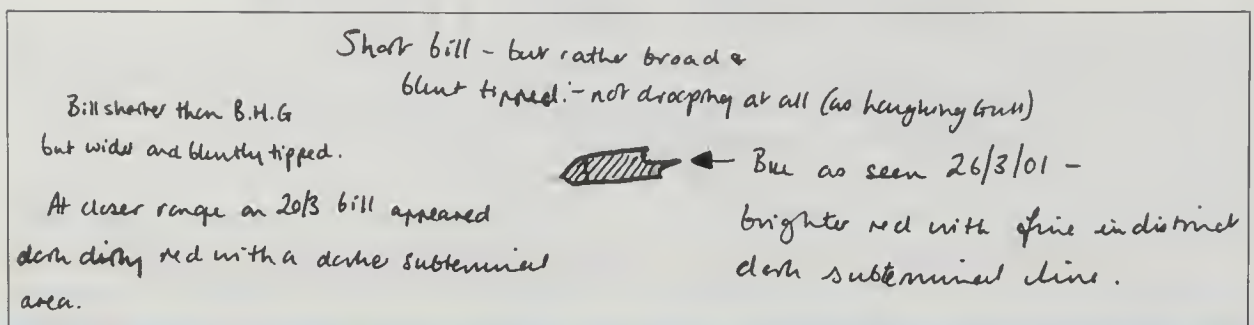


Fig. 2. Steve Howell (pers. comm.) commented that, in winter, Franklin's Gull *Larus pipixcan* shows a distinct orange tip to the bill, which appears almost like a pale nail to the dark bill. This feature was not apparent on the Boddington gull, further evidence that it was not a Franklin's Gull.

of Black-headed Gull, and not as broad as on Mediterranean Gull *L. melanocephalus*. Rather dark in colour, almost blackish at a distance but actually dirty, dark red with perhaps a lighter base (fig. 2). At the end of its short stay, the bill appeared redder and brighter, with a faint darker line about a quarter of the way from the tip. This brighter colour was quite obvious even at a distance. Leg colour and structure not seen. Eye dark, but highlighted by the obvious white eye-crescents. Eyes often looked half closed. [Bill structure slightly shorter and deeper than that of Black-headed Gull, with a blunter tip. Bill colour dark brown, with only basal quarter appearing deep red (MRA). Bill pale red with a thin subterminal band (MK).]

Identification doubts

On 18th March, a handful of observers, including MK, voiced their concerns about the identification, basing their doubts primarily on the size of the bird and the mantle colour. They considered it to be too large for Franklin's Gull (slightly larger than Black-headed Gull), while the mantle tone seemed too pale, and closer to that of Common Gull. In his submission to BBRC, MK provided a detailed analysis of the bird, and concluded that it could not be a Franklin's Gull, but was, perhaps, a hybrid Mediterranean \times Common Gull. On circulation of the record there was general agreement within BBRC that, although the bird closely

resembled a Franklin's Gull, it exhibited a number of features that were inconsistent with this identification. The principal concerns included the following.

Size

Observers' perception of the size of the gull varied considerably. GP considered it to be marginally shorter in length than Black-headed Gull but somewhat bulkier. This estimate was rechecked after others had expressed concerns that it was too large for Franklin's Gull. MRA also considered the bird to be slightly smaller than Black-headed Gull, but MK considered it equal to Common Gull in size. Franklin's Gull should not approach Common Gull in size; there is little or no overlap in size between these two species (table 1). Even if it was closer to the size of a Black-headed Gull, there would still be cause for concern, since Franklin's Gull is usually obviously shorter-winged than Black-headed.

As some similarly sized gull species are relatively longer-winged than others, measurement of wing length may give a slightly misleading impression of relative size. It is clear from table 1, however, that there is a considerable gap between the longest wing measurement for Franklin's Gull (286 mm) and the shortest wing measurement for Common Gull (320 mm); in addition, there is also little overlap in weight between the smallest Common Gull and largest

Table 1. Measurements of Franklin's Gull *Larus pipixcan*, Black-headed Gull *L. ridibundus*, Mediterranean Gull *L. melanocephalus* and Common Gull *L. canus* (wing length and bill length from Grant 1986; (summer) weights from Cramp & Simmons 1983).

	Wing length (mm)	Bill length (mm)	n	Weight (g)	n
Franklin's Gull	262-286	27-34	26	220-335	40
Black-headed Gull	280-315	30-37	12	190-340	16
Mediterranean Gull	282-311	31-38	21	no data	—
Common Gull	320-385	30-38	16	300-480	148

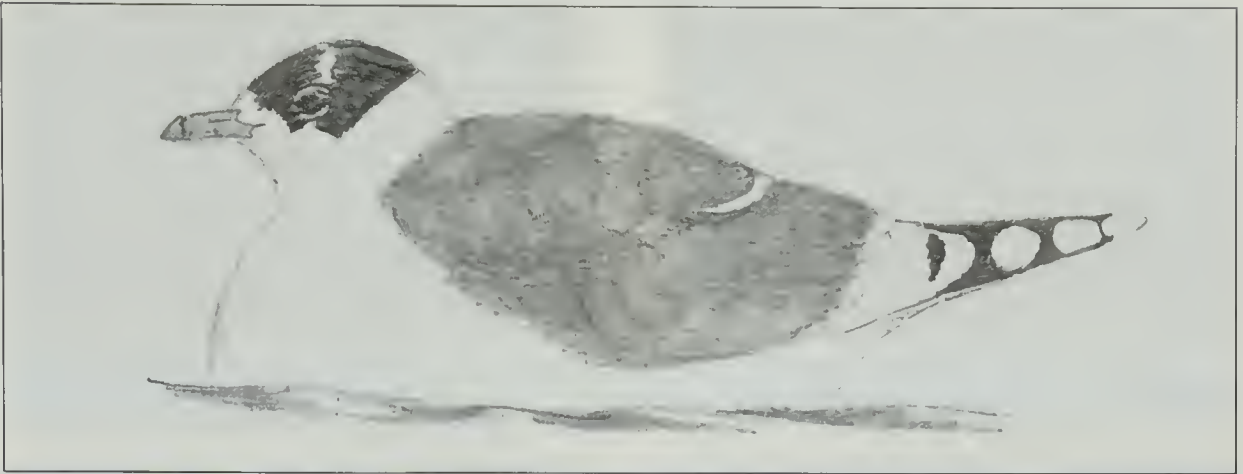


Fig. 3. When compared directly with Common Gull *Larus canus*, the mantle tone of the Bodington gull was similar: Adult Franklin's Gull *L. pipixcan* should appear distinctly darker on the mantle than an 'average' winter Common Gull, being somewhere between this and Lesser Black-backed Gull *L. fuscus* of the form *graellsii* in tone and, perhaps, closer to the latter. Common Gull does, however, exhibit limited variation in the grey of the mantle, with the tone of some exceptionally dark individuals seeming to approach that of Franklin's Gull, especially when viewed in dull, overcast, light conditions.

Franklin's Gull. Although there is slight overlap in wing length between the smallest Black-headed and largest Franklin's Gull, any gull that is similar in size to an *average* Black-headed Gull, and perhaps closer to Common Gull, is clearly too large to be a Franklin's Gull.

Mantle colour

The various accounts consistently established that the tone of the mantle was close to that of Common Gull. The views on the first evening were rather distant and made in dull, heavily overcast conditions, making accurate assessment of the mantle colour difficult. On subsequent evenings, the bird was closer and seen in better light (fig. 3).

Howell (2003) devised a reliable and repeatable means of establishing the upperpart colour of adult gulls in North America using a scale of

Table 2. Comparative Grey Scale values of the mantle colour of Common Gull *Larus canus*, Franklin's Gull *L. pipixcan* and Lesser Black-backed Gull *L. fuscus*, taken from Howell (2003).

Taxon	Grey Scale value
Common Gull <i>L. c. canus</i>	5-6.5
Common Gull <i>L. c. heinei</i>	5.5-7
Franklin's Gull	8-9
Lesser Black-backed Gull <i>L. f. graellsii</i>	9-11

varying intensity of greys. This was based upon a Grey Scale colour chart developed by Kodak, which used 19 evenly spaced tones of grey, ranging from very pale grey (colour 1) to black (colour 19). By comparing the mantle colour of multiple series of museum specimens, Howell found that most individuals of each taxon display a consistent grey tone to the upperparts,

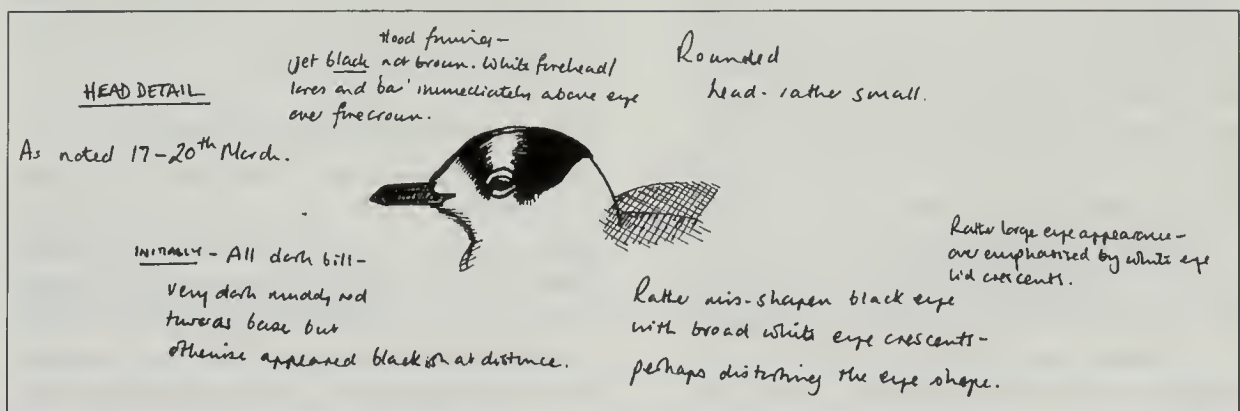


Fig. 4. Although the head pattern was superficially similar to that of adult Franklin's Gull *Larus pipixcan* in non-breeding plumage, there were a number of subtle differences. The most significant of these was that the hood extended only down to the lower edge of the eye. Outside the breeding season, the dark head-markings on Franklin's Gull should extend well below the level of the eye, particularly onto the ear-coverts, but also below the eye itself.

varying by only 1–1.5 Grey Scale values; and that the majority of individuals of most taxa varied by no more than half a Grey Scale value from the mean value for that taxon. Table 2 shows the Grey Scale values of species relevant to this discussion, and suggests that even an exceptionally dark Common Gull of the form *heinei* should always be noticeably paler than the palest Franklin's Gull.

Head pattern

Detailed sketches made during the first few days of its stay established that the head pattern (fig. 4) was incorrect for adult winter Franklin's Gull. By the last day of its stay, however, it had developed a more extensive hood, which closely resembled the pattern shown by a Franklin's Gull.

The Draycote gull

One year later, in March 2002, a similar small gull was found by John Judge in the gull roost at nearby Draycote Water, Warwickshire. Like the Boddington gull, it too showed a partial black hood, a mantle tone similar to that of Common Gull, and black primaries with large white tips. Initially, it was assumed that this was the same individual that had been seen at Boddington the previous spring. Photographs were posted on the Surfbirds website (www.surfbirds.com/Rarities/draycote-gull-0302.html; see plates 154 & 155), however, and it became obvious that there were a number of differences between this individual and the Boddington gull. In particular, the primary pattern appears to be different from that of the Boddington gull, with extensive black in the outermost primaries (P10–P8) and extensive white tips to P9 and P10, while the extent of black on the next two or three primaries (P7–P6/5) is greatly reduced. The extent of black on the primaries of a gull might vary from one year to the next, especially if not fully mature, but we would expect the amount of black to diminish rather than increase, and certainly not to increase to the degree apparent in the Draycote gull. Furthermore, the primary pattern of the Draycote gull more closely resembled that of a Common Gull, and discussion at the time concluded that this bird was likely to have been a Mediterranean × Common Gull hybrid. The mixture of features shown in the photographs certainly does seem to fit this combination.

Withdrawal of the Boddington claim

The Draycote gull revived interest in the identity of the Boddington gull. After seeing the Draycote gull, GP contacted BBRC and requested that the Boddington claim be withdrawn from circulation. He stated his belief that, if not the same individual, it was most likely that the Boddington gull was a hybrid and of the same parentage (presumably Mediterranean × Common Gull) as the Draycote gull.

Other records of presumed Mediterranean × Common Gulls

A potential first-winter hybrid Mediterranean × Common Gull was photographed at Groningen, Netherlands, in January 1991 and its identification discussed by Balten *et al.* (1993). Another probable hybrid, described by Oddie (1994), occurred on Hampstead Heath in December 1993 and resembled a second-winter Common Gull. It differed in being smaller than an average Common Gull, with a dark primary wedge, restricted white mirrors (so presumably a second-winter bird), showed finer head speckling than other Common Gulls, and possessed a head shape resembling that of Mediterranean Gull along with a dark red bill. Images of a similar bird, photographed by Mike Tarrant at Rimac, Lincolnshire, on 21st June 2002 (http://www.lincsbirdclub.co.uk/rare_birds/hooded_gull.htm; see plates 156 & 157) may also have been of the same parentage. This bird resembled the Draycote gull but differed in a number of subtle aspects. The head showed a restricted hood and much less conspicuous eye-crescents, while the primary pattern and bare-part coloration were also different. Brian Small (pers. comm.) has also observed at least two different Mediterranean × Common Gull hybrids in Suffolk in recent years, although neither resembled the Boddington gull.

Implications for observers in Europe

There is little information available, in even the most modern field guides, about hybrid small gulls. The fact that some hybrids can closely resemble individuals of other species raises obvious concerns when poorly or briefly seen individuals are involved. In this case, a previously unrecognised but obvious identification pitfall has been highlighted. Although the identification of the Boddington gull was particularly challenging, as all observers agreed that the wing pattern was spot-on for Franklin's Gull, a

Steve Valentine



Steve Valentine

154 & 155. Hybrid gull *Larus*, presumed to be a Mediterranean *L. melanocephalus* x Common Gull *L. canus*, Draycote Water, Warwickshire, March 2002.

Mike Tarrant



Mike Tarrant

156 & 157. Hybrid gull *Larus*, presumed to be a Mediterranean *L. melanocephalus* x Common Gull *L. canus*, Rimac, Lincolnshire, June 2002; plate 156 shows a Common Gull *L. canus* on the left.

similar individual seen briefly or on just a single occasion, and for which there were less detailed notes, could easily have been accepted as Franklin's Gull. This also raises the remote possibility that Franklin's Gull was actually one of the parents.

The breeding ranges of both Common Gull and Mediterranean Gull have expanded considerably in western Europe during recent decades. For example, both species now breed regularly in France, Belgium and The Netherlands (Snow & Perrins 1998) and the frequency of hybrids from such areas may be greater than in their core ranges until substantial breeding populations are established.

Post Script

Remarkably, in early November 2002, Gary Pullan found an adult Franklin's Gull at Stanford Reservoir on the Leicestershire/Northamptonshire border, where it returned to roost for

three consecutive nights. Even more remarkable was that this same individual was then relocated at Draycote Water, by John Judge, the following day...

Acknowledgments

Thanks go to Martin Elliott, Adam Rowlands, Brian Small and Steve Howell for helpful comments that improved the text, and to all those who submitted notes on this interesting gull.

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Snowy Egret in Argyll & Bute: new to Britain

Bill Jackson



158. Snowy Egret *Egretta thula*, Balvicar, Argyll, April 2002. Bill Jackson

Rumours of the presence of an unusual white bird feeding on the shore, and occasionally in waterlogged gardens, at Balvicar, Argyll & Bute, had been circulating through the local community since about 30th October 2001. As with so many rumours, it was difficult to know whether to place much faith in this one, although the description sounded sufficiently like that of an egret *Egretta* to be worthy of further investigation. Despite my misgivings, I did look for it, albeit briefly, on several occasions and was pleased when I finally located it sitting hunched up in the grasses opposite Balvicar Post Office on 5th November 2001. Although the weather was absolutely appalling, the bird was clearly an egret of some kind, but in the driving rain and poor light, I assumed it to be a Little Egret *E. garzetta*, which is extremely rare in western Scotland. Despite the atrocious weather, I managed to take a series of rather distant photographs and make a short video recording before returning home to tele-

phone Jim Dickson (JD), my neighbouring birder, who is based at Lochgilphead, some 50 minutes' drive away.

JD arrived in the early afternoon and we settled down to watch the egret feeding in the tidal pools on the rocky shoreline. By now, the weather conditions had slowly improved, so we decided to approach the bird more closely and try to obtain better photographs. As we did this, I began to note several features that I thought unusual for Little Egret, including its strikingly yellow legs, marked with a black stripe up the front, and the yellow facial skin around the eye and bill base. Then the penny dropped! We were watching Britain's first Snowy Egret *E. thula*, and the enormity of the find began to sink in. Before releasing the news to the outside world, we compared my photographs with those in reference books at my home and I also downloaded photographs of Snowy Egret from the internet. This removed all doubt from our minds. Confident of our identification, I

e-mailed photographs of the bird far and wide and, by late afternoon, John Holloway's words were ringing in my ears over the phone as we looked at our photos: 'check the legs and the lores'. Furthermore, Jim Duncan had e-mailed me a page from Kenn Kaufman's book with the accompanying message: 'Here's your bird Bill, Snowy Egret!'

The following morning (6th November) brought the hard core of British twitchers to the golf course, some 50 to 60 in all, and this was the start of the largest gathering of birders ever to be seen in Argyll, and probably Scotland. It was good to see a few old friends whom I had met while living in Shetland, along with several of Britain's top bird photographers. Over the next few days a regular pattern of behaviour emerged. At first light, about 08.30 hrs, the egret would arrive from its nearby roost in the pine trees at Balvicar Farm and settle into a feeding routine depending upon the state of the tide. Food was no problem for it, with several 'flatties' and other fish being caught using a combination of foot-paddling and a swift strike with its dagger-like bill. Continually feeding, the bird was obviously in excellent health, suggesting that it had made a speedy recovery from its transatlantic flight.

During the egret's tour of western Scotland, an estimated 4,500 birders managed to catch up with it. This included a rough estimate of some 2,500 at Balvicar lagoons alone, where all were rewarded with outstanding views, some down to just a few metres, as it fed quite unconcerned and seemingly oblivious to the hordes of photographers. During its three periodic visits to Balvicar, it became a popular attraction, with many locals, including school children, taking an interest.

Description

The following description was submitted to BBRC:

Size and structure A small egret, very similar in size and structure to Little Egret, although perhaps slightly smaller and more compact, with

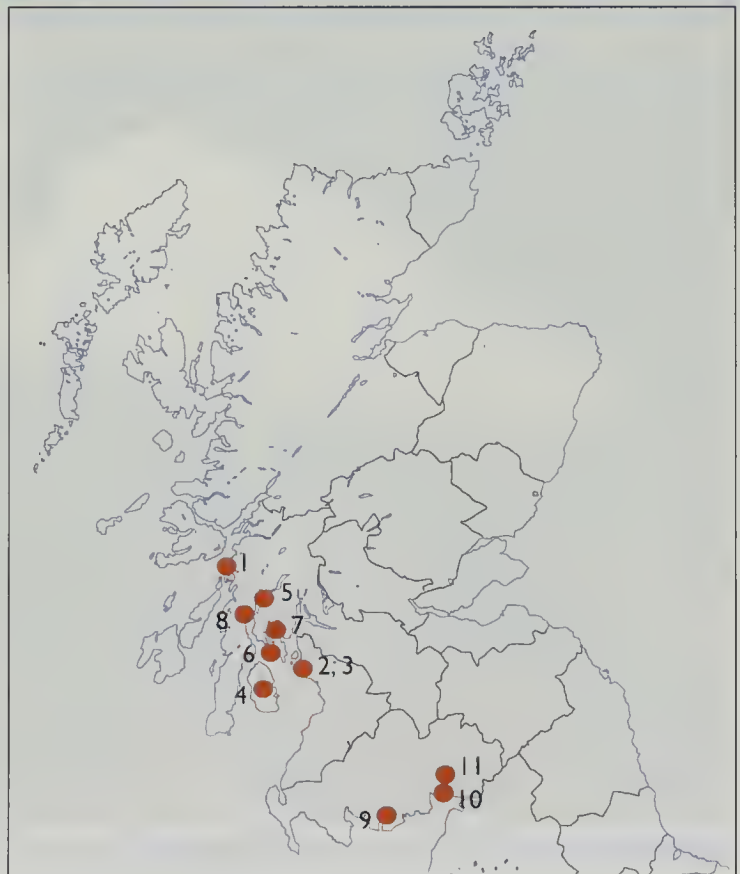
shorter legs (no direct comparison possible, obviously!). Bill long and pointed, but appeared slightly shorter than that of Little Egret, length approximately 1.25 times longer than the head length, and slightly kinked downwards towards the tip. At rest, the closed wings reached to end of tail.

Plumage Entirely white, with very short, fine

Fig. 1. Map showing the locations (with dates) that the Snowy Egret *Egretta thula* visited during its stay in Scotland. The numbered locations are listed below.

1. Balvicar, Seil Island, Argyll & Bute, 5th to 25th November 2001, 4th April to 3rd May 2002 and early June to 7th June 2002
2. Ardrossan, Ayrshire, 22nd and 23rd December 2001
3. Stevenson's Point, Ayrshire, late December 2001 to 9th January 2002
4. Isle of Arran, 13th January to 28th March 2002
5. Loch Fyne, Argyll & Bute, 3rd April and 22nd May 2002
6. Ettrick Bay, Bute, 9th May and again, 15th to 18th May 2002
7. Loch Riddon, Argyll & Bute, 19th May 2002
8. Castleton, Lochgilphead, Argyll & Bute, 25th to 31st May 2002
9. Tongland Bridge, Dumfries & Galloway, 19th August 2002
10. Caerlaverock, Dumfries & Galloway, 6th September 2002
11. Lochar Water, Dumfries & Galloway, 7th to 17th September 2002

A number of other, as yet unsubstantiated claims came, have yet to be submitted to BBRC for assessment, including Orundale, 10th May 2002; and feeding on a small burn at Duntocher, West Dunbartonshire, on 12th December 2002. If accepted, these will help to fill in some locations it visited during its stay when it went missing for long periods.



plumes on the nape and loose feathering on the breast.

Bare parts Bill appeared entirely black at a distance, but at close range the base of the upper mandible was noted as bright yellow, and inner two-thirds of lower mandible pale horn. Small area of bare skin around eye, lores and corners of gape bright yellow. Legs and feet yellow with greenish tinge, with black line on front of tarsus just above feet extending above knee and onto lower part of tibia. Iris bright yellow.

Behaviour Similar to Little Egret in feeding behaviour and jizz, but often more approachable than is typical for that species.

Its travels through western Scotland

Following its disappearance from Balvicar on 25th November, what was almost certainly the same individual was relocated at several sites throughout western Scotland until its final appearance at Lochar Water, Dumfries & Galloway, from 7th to 17th September 2002. The locations which it visited during its protracted stay in western Scotland are shown on the map in fig. 1.

Range and distribution

Snowy Egret is a common and widespread species throughout the warm temperate regions

of the USA; it has recently expanded its breeding range north along the Atlantic seaboard and is now a regular breeder as far north as Maine. Although the northern breeders are migrants, wintering south to the Gulf of Mexico, many spend the winter along the eastern seaboard of the USA, north to New Jersey. To the south, Snowy Egret is resident or dispersive throughout tropical Central and South America, south to southern Chile and northeastern Argentina (del Hoyo *et al.* 1992). Prior to the appearance of this individual, Snowy Egret had been recorded within the Western Palearctic on just five previous occasions, including singles in Iceland in April 1974, June 1983, and May or June 1985; and on the Azores, where two were at Santa Cruz, Flores, on 10th-11th October 1988 (Snow & Perrins 1998), and a further individual was seen on Terceira on 11th November 2000. Subsequently, Snowy Egret has been reported from the Azores on a further four occasions: Porto Pim, Faial, 18th November 2001; Horta harbour, Faial, 12th January 2002; and Porto Pim from 13th to 27th November 2003, with a different individual at this same site on 21st-24th December 2003 (data from the Western Palearctic year annual reports published in *Birding World* unless otherwise stated).



Bill Jackson

159. Snowy Egret *Egretta thula*, Balvicar, Argyll, April 2002.

Weather conditions and associated species

In the days preceding and following the discovery of the Snowy Egret, several Nearctic vagrants appeared in southern England and south Wales. These included a Cliff Swallow *Hirundo pyrrhonota* on Scilly, on St Agnes and St Martin's on 26th October, later moving to St Mary's where it remained until 30th October. This was followed by a Bobolink *Dolichonyx oryzivorus* at Easington, East Yorkshire, on 27th October and a Chimney Swift *Chaetura pelagica* on St Mary's and St Martin's on 28th–29th October. Immediately following the egret's discovery, a Redhead *Aythya americana* appeared on Kenfig Pool, Glamorgan, on 7th November, where it remained until 5th February 2002, while a Lesser Scaup *Aythya affinis* at Swineham Gravel-pits, Dorset, was found on 11th November and stayed to 29th April 2002 (for further details, see the BBRC Report for 2001, *Brit. Birds* 95: 476–528).

The weather situation over the North Atlantic on 23rd and 24th October, and again between 27th and 30th October 2001, appeared suitable for transatlantic vagrancy. Long, trailing cold fronts extended across the Atlantic, and were accompanied to the south during each period by a strong southwesterly airstream. A closer examination of the trajectory of the latter spell of southwesterly winds, however, indicates that they originated too far to the east of the USA, and were largely unsuited to a transatlantic crossing towards Scotland. If this analysis is correct, then it seems unlikely that the Snowy Egret arrived later than 25th October. Although it is uncertain when the bird actually made landfall, prior to its discovery on 5th November, the rumoured 'unusual white bird' at Balvicar from about 30th October almost certainly referred to this individual.

European status of Nearctic herons

Many North American herons, egrets and bitterns perform long-distance migrations between breeding regions in southern Canada and the northern states of the USA, and southern wintering quarters. During migration, some must overfly a part of the western North Atlantic, making them susceptible to transatlantic vagrancy. It is surprising, therefore, that their appearance on this side of the Atlantic does not occur more frequently. Perhaps their relatively large size enables them to cope better with the initial displacement during the

autumn storms that bring many Nearctic waterfowl, waders and landbirds to our shores. Alternatively, many may be unable to cope with high-speed transatlantic vagrancy, and although displaced by storms, few may carry the necessary fat resources required to make a successful crossing. It also seems likely that the southerly breeding species can avoid some storms by migrating close inshore, and such behaviour would make their appearance in northwest Europe highly improbable. In contrast, the more northerly breeders may take a more direct route to wintering areas, which would involve long flights over the open ocean.

For whatever reason, the relatively small number of these large, conspicuous and attractive species occurring in Britain and north-western Europe remains something of a mystery. What makes their absence all the more striking is that the most frequently encountered Nearctic heron species in Britain, American Bittern *Botaurus lentiginosus*, is actually one of the more elusive species; there have been a total of 40 records in Britain to the end of 2003, although only seven of these have occurred since 1958 (Pete Fraser pers. comm.). Elsewhere in Europe, American Bittern has also occurred in Iceland, the Faeroe Islands, Ireland, the Channel Islands, Denmark (where a booming male was heard at Bygholm Vejle, Nordjylland, for three consecutive summers between 2001 and 2003, and was reported again in early May 2004), Norway and Spain, further establishing its credentials as the most frequently occurring Nearctic heron in Europe. Until the appearance of the Snowy Egret, only one other Nearctic heron, Green-backed Heron *Butorides virescens*, had occurred in Britain. There were just four records of the latter species up to the end of 2003, of which three have occurred since 1958. Elsewhere in Europe, single birds have also been discovered on Jersey, Channel Islands, in August 1992, with presumably the same individual being relocated on nearby Guernsey in September 1992; Morbihan, France, in April 1994; and Iceland in October 2001.

Other Canadian breeding herons that have occurred in European countries bordering the North Atlantic include Least Bittern *Ixobrychus exilis* and Great Blue Heron *Ardea herodias*. Both would seem equally susceptible to transatlantic vagrancy, and both have yet to appear in Britain. Is their appearance here inevitable? Least Bittern, with just one European record (in

Iceland, in September 1970; Snow & Perrins 1998), remains a possibility, although its skulking nature would probably make discovery difficult away from intensively watched areas such as Scilly. Great Blue Heron, again with just a single European record (at Ouessant, Finistère, France, from 11th to 26th April 1996; Snow & Perrins 1998), is another possibility, but one that could be relatively easy to overlook as a Grey Heron. Great Blue Heron appears to rest on ships at sea regularly, and has made several documented ship-assisted transatlantic crossings, which were summarised by Gantlett (1998). During some, perhaps all, of these crossings, the birds were fed onboard ship or taken into captivity. These include a bird that boarded a ship some 550 km southwest of the Azores on 29th October 1968. It was taken into captivity and fed, and although later released, remained with the ship until it reached Avonmouth, where it was again captured and taken to Rode Tropical Bird Garden at Frome, Somerset. After recovering, it was placed in an open aviary and disappeared, never to be seen again. Another individual landed on a cargo ship about 320 km west of the Azores on 28th April 1995 and was taken into care. It finally arrived in Antwerp, Belgium, on 5th May, where it was held in captivity until being released in Cuba in August 1995.

Outside Europe, the Azores appear to be the most likely location for discovering vagrant Nearctic herons and bitterns in the Western Palearctic. Despite being relatively under-watched, the numbers and variety of species

reported here greatly outnumber those recorded throughout Europe, with the exception of American Bittern. To the end of 2003, the numbers reported (but not necessarily yet accepted by the Portuguese Records Committee) included four Least Bitterns; three Little Blue Herons *Hydranassa caerulea* – including a bird ringed as a nestling in June 1964 in New Jersey, USA and found on Flores in November 1964 (Snow & Perrins 1998), plus recent records in October 1997 and 1998; an immature Tricolored Heron *Hydranassa tricolor*, at Lajes, Azores in October 1985 (Snow & Perrins 1998); six records of Green-backed Heron between 1978 and 2000; and up to 12 Great Blue Herons, including ten on São Miguel, Pico, and Faial in April 1984, with one remaining until June 1984 (data from annual reports in *Birding World* unless otherwise stated).

Separation of Little and Snowy Egrets

Given good views, the separation of Little and Snowy Egrets should present few problems. Perhaps the greatest challenge now lies in finding a Snowy among the hundreds of Little Egrets that frequent the shores of southern England. Having found a suspected Snowy Egret, the following combination of pointers, taken from Massiah (1996), should establish the identification beyond doubt, at any time of year.

- The bright yellow lores of Snowy Egret are diagnostic at all ages.
- Snowy Egret almost invariably shows bright



160. Snowy Egret *Egretta thula*, Balvicar, Argyll, December 2001.

golden-yellow feet, including the soles, rather than the lemon-yellow feet and greenish soles typical of Little Egret.

- Snowy Egrets, of all ages, show a variable yellow stripe that extends up the rear of the tarsus and, in some cases, onto the tibia.
- The majority, perhaps 70-75%, of Snowy Egrets are distinctly smaller than Little Egret, although the remainder can overlap with Little.
- The legs of the vast majority of Snowy Egrets appear both shorter and thinner than those of Little Egret.
- The neck of Snowy Egret is shorter, so can appear proportionately thicker.
- The bill of Snowy Egret is slightly shorter and less dagger-like than that of Little Egret and, in direct comparison with Little, the difference in structure would tend to be exaggerated outside the breeding season because of the duller, grey lores of Little.

The only caveat to add to the above pointers

would be that, for a few weeks during the courtship period at the start of the breeding season, the facial skin and feet of both species can flush and become richer in colour. In Snowy, the lores can range from scarlet to reddish-orange, the feet bright red to orange-red and the legs become solidly black. In contrast, Little Egret can exhibit even greater variability, with the lores ranging from deep red to purplish-grey and the feet red to orange-red. These colours only last for a few weeks and when incubation commences, the colours will typically have moderated.

Acknowledgments

I would like to thank Jim Dickson for all his help with this bird; and also Jim Duncan and John Holloway for responding so quickly to my initial e-mails, supplying additional references and confirming their agreement with the identification. Norman Elkins kindly provided the analysis of Atlantic weather conditions prior to the bird's arrival and Pete Fraser supplied current statistics for BBRC rarities.

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Bill Jackson, *The Smithy, Auchnasaul by Clachan Seil, Oban, Argyll PA34 4RH*



EDITORIAL COMMENT Colin Bradshaw, Chairman of the British Birds Rarities Committee commented: 'Since there have been records of Snowy Egret in the Azores and Iceland, and Little Egrets in the Caribbean and along the east coast of North America, we know that the North Atlantic is not an insurmountable barrier to the smaller herons making the crossing in either direction. So, it was really only a matter of time before a Snowy Egret was identified in Britain. The relatively subtle identification features include the bright yellow lores contrasting with the predominantly black upper mandible, and yellow extending from the feet up the rear of the tarsus. This bird's confiding nature allowed confirmation of all these features, with some superb photographs being taken.

'This is surely the first species new to Britain where the immediacy of the internet has allowed birders, living in an isolated spot, access to the peer discussions that are such a help when finding a major rarity in a more populous area. It is also interesting to speculate whether the rarity of Little Egrets in Scotland was a help or a hindrance. If this bird had appeared in southern Britain, might it have been overlooked because no-one would have really studied it? Equally, the lack of Little Egrets to compare it with in the north could have made it harder for the observers to realise that it was something different, although, happily, that was not the case with this bird.'

Eric Meek, Chairman of the British Ornithologists' Union Records Committee, commented: 'Specific identification was straightforward, but ageing proved more problematic and had to be left undetermined. The advice of our expert on captive birds, Roger Wilkinson, was to the effect that the escape likelihood was extremely unlikely and this, together with the date and locality, convinced BOURC that this was a genuinely wild bird.'

Species limits in *Acrocephalus* and *Hippolais* warblers from the Western Palearctic

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Andreas J. Helbig, Alan G. Knox,
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Sedge Warbler *Acrocephalus schoenobaenus*

Richard Johnson

ABSTRACT The taxonomic affiliations within the genera *Acrocephalus* and *Hippolais* have long been a matter for debate. Recent molecular and behavioural studies have provided a wealth of new data which can be used to analyse the evolutionary relationships of the Palearctic taxa in these genera. In this paper, we make a series of recommendations for changes in species limits, highlight some problem areas and discuss situations where more research is needed.

Introduction

A long period of taxonomic stability followed the publication of the 'Voous List' for Holarctic birds (Voous 1977), but in recent years there have been dramatic advances in our knowledge of the evolutionary relationships of birds, leading to a period of activity that shows no sign of abating. These advances stem largely from new and exciting ways to study birds, both in the field and in the laboratory. Observations from a variety of disciplines, both professional and amateur, are providing valuable data which can be used to resolve problems in phylogeny and taxonomy. Developments in ecological and behavioural analysis and molecular and population genetics have allowed new insights into evolution and phylogenetics, and these have combined with a revised view of the species concept to generate a significant reappraisal of the taxonomic relationships of many of the species that we thought we knew so well.

The BOU Records Committee's Taxonomic Sub-committee (TSC) has recently reported on its approach to the recognition of species (Helbig *et al.* 2002; Parkin *et al.* in press). Essentially, the TSC regards a species as a population lineage which maintains its integrity through space and time: the 'General Lineage Concept', advocated by de Queiroz (1999). As such, a species is defined as a group of populations which is identifiably (diagnosably) different from other such groups; is reproductively isolated from them; shows substantial divergence from them at a genetic level; and whose members share a common mate-recognition and fertilisation system (Helbig *et al.* 2002; Parkin 2003). Diagnosability may be morphological (plumage or structure) or molecular (absolute differences in DNA sequence). Genetic divergence implies that, although the genetic structure is not diagnosably distinct, there are differences in gene frequency which indicate a prolonged period without gene flow. Species-recognition systems require behavioural or acoustic characters which prevent, or at least substantially reduce, the likelihood of hybridisation. In a particular species group, these data may come from a wide range of sources such as behavioural, ecological or molecular analyses, field observations or biometric data collected by ringers.

Recent research on the warblers (Sylviidae) has provided a wealth of new data for a bewil-

dering array of small and difficult birds (for example Emei Leaf Warbler *Phylloscopus meiensis*, Alström & Olsson 1995; the chiffchaff complex, Helbig *et al.* 1996; and the Greenish Warbler *P. trochiloides*, Irwin *et al.* 2001a,b,c), which has led to an improved understanding of their evolution, and hence their taxonomic relationships. This paper draws together some recent studies which together provide a clearer picture of an especially complex group, the *Acrocephalus* and *Hippolais* warblers, and we present the reasons for changes to the British List recommended by the TSC (Knox *et al.* 2002). The paper is largely restricted to the Western Palearctic, only straying beyond its boundaries where it is necessary to establish the limits of species which occur within it. We have followed the criteria discussed by Helbig *et al.* (2002), attempting to determine whether there is evidence that the individual taxa form separate evolutionary lineages between which there is little or no gene flow. Where we find clear differences between the taxa, we treat these as separate species; if they show some divergence, but are not diagnosably distinct in at least two independent characters (e.g. morphology, vocalisations, DNA), we treat them as subspecies.

There are many publications relating to the identification of *Acrocephalus* and *Hippolais* warblers, and the field characters of many species are now well established. Not infrequently, however, a 'mystery' bird is discovered which does not fall easily into a predetermined category. Observers attempt to determine its identity, often by elimination (e.g. Dunn 2001), and with the help of museum skins, photographs and experts. Typically, the conclusions arrived at cannot be tested, because the original bird is no longer available. In most cases, the correct identification is probably established but such an approach is dangerously close to a circular argument and, although useful, is certainly not scientific. Only by ground-truthing the conclusions with individuals of known identity can the criteria developed in this way be tested. This is rarely done. More frequently, the characters used to determine the specific identity of an individual vagrant become enshrined into knowledge, or even folklore, until further evidence casts doubt on these criteria. Such are the advances being made within difficult groups, including *Acrocephalus* and *Hippolais* warblers, that many established criteria are in a state of flux, with new develop-



161. Melodious Warbler *Hippolais polyglotta*, Algarve, Portugal, June 1998. Occurring in the most straightforward of the six 'groups' considered in this paper, Melodious and Icterine Warbler *H. icterina* form an obvious species pair; which is supported strongly by molecular evidence.

ments frequently dispelling previously held misconceptions.

Of greater value is research involving individuals of proven identity and natal origin. Studies based on birds of known breeding provenance should be used to generate baseline morphological, vocal or genetic data, providing the opportunity for sound statistical analysis and interpretation. Research based on birds trapped or collected on migration is of lesser value because the population of origin will generally be unknown. This review attempts to restrict itself to studies conducted in the former way.

Some of the results discussed here relate to field identification, vocalisations or genetics, and come from trapping and ringing studies; others are based on museum specimens. Despite the current trend away from collecting specimens for scientific purposes, there is no doubt that research based on museum skins has a major advantage over many other approaches, since it is possible for subsequent researchers to revisit and reassess precisely the same individuals. A strong case can be made for professional scientific research to *require* the collection of birds for studies of morphology or genetics, and their permanent and secure storage (as voucher specimens) for the benefit of future researchers. Indeed, some journals maintain this practice, and will only accept scientific reports which are

supported in this way. Where specimens are not preserved, future researchers can never be completely certain to which taxon a particular individual in any study belonged. The fact that a particular observer identified it may not be deemed acceptable in 50 or 100 years time, when his or her skills have been forgotten. If specimens are not taken for permanent storage, it is even more important that the exact date and location is recorded for every individual record. A Willow Warbler *P. trochilus* trapped in May at its breeding site in Oxfordshire can at least be assigned to a population that may be resampled again in the future. The provenance of a Willow Warbler trapped on migration, for example in September on Fair Isle, Shetland, or Helgoland, Germany, is less easily determined. So, in this review, greater credence is given to studies which utilise museum skins (since these can be re-examined in the future) or birds trapped while breeding (because their population of origin is known).

The most important reviews of plumage (colour and pattern) and morphology (size and shape) include those by Baker (1997), Beaman & Madge (1998), Cramp (1992), Glutz von Blotzheim & Bauer (1991), Harris *et al.* (1996), Lewington *et al.* (1991), Shirihai *et al.* (1995, 1996), Svensson (1992, 2001), Williamson (1960) and Zimmerman *et al.* (1996). Several of these are identification guides, however, and

tend to emphasise differences rather than continuities in phenotype. Behavioural and vocalisation studies include those of Lemaire (1977), Dowsett-Lemaire & Dowsett (1987) and Svensson (2001). Important studies which have utilised DNA sequences include Leisler *et al.* (1997), Helbig & Seibold (1999) and Bensch & Pearson (2002).

Previous genetic research

Reference to technical papers by Leisler *et al.* (1997) and Helbig & Seibold (1999), in which the molecular structure of the *Acrocephalus* and *Hippolais* warblers was investigated, will recur throughout this paper, so it is worth devoting a few lines to their scope, strengths and weaknesses. Leisler *et al.* (1997) examined the structure of two mitochondrial genes by sequencing 1,068 base pairs of the cytochrome *b* gene and the adjacent *tRNA-thr*. These two genes are widely used in avian evolutionary studies because mitochondrial genes evolve rapidly (Parkin 2003). Consequently, populations which are reproductively or geographically isolated diverge in their genetic structure, and the sequencing reveals this divergence. Each individual is expected to have a single sequence (or haplotype) and Leisler and his colleagues analysed between one and 11 individuals per taxon (mean = 2.8). Initially, they sequenced approximately 480 base pairs per bird; if they identified more than one haplotype among the birds in a particular taxon, the complete 1,068 base pairs was obtained from at least two individuals. It is conventional now to deposit original DNA sequences in one of the international data banks, where they can be examined by future researchers, compared with subsequent data, and accumulated into more comprehensive analyses. The sequence data reported by Leisler *et al.* (1997) were not so deposited, and thus cannot be examined independently. Furthermore, they do not give the detailed provenance of many of their birds, simply the country and the name of the collector. Many were undoubtedly collected on migration, and so suffer from the identification/provenance problems discussed above.

Helbig & Seibold (1999) analysed 1,041 base pairs of the cytochrome *b* gene. Geographic provenance (country, and often specific region) and status (breeding or migrant) is given for all birds (see table 1 in Helbig & Seibold), and full sequences are available from the European Mol-



Steve Votier

162. Clamorous Reed Warbler *Acrocephalus stentoreus*, Eilat, Israel, autumn 1991. Clamorous Reed Warbler is treated as a polytypic species, with three subspecies in the Western Palearctic – *stentoreus*, *levantina* and *brunnescens*, as shown in fig. 8.

ecular Biology Laboratory data bank. Again, however, voucher specimens were not obtained and some birds were trapped on migration.

In both of these studies, the researchers determined the DNA sequence for the region of the mitochondrial genes which they studied. They compared the sequences for different individuals by aligning them and identifying the places where the sequences differed. The data were then analysed using molecular evolutionary statistical techniques which develop phylogenies (evolutionary trees) depending on the similarity of the sequences. Several different statistical techniques are possible, which provide more or less identical results, and we have presented results derived from the Neighbour-Joining technique. This starts by linking those DNA sequences which are most similar, then adds those that are less alike and so on, eventually generating a phylogenetic 'tree'. Species with similar sequences are placed closer together in the tree, and those with more different sequences lie further apart. Statistical confidence in the trees is provided by a technique called 'boot-strapping', details of which can be found in Futuyma (1998). This gives an

assessment of the likelihood that a particular part of the tree is due to real phylogenetic patterns in the data, rather than having arisen by chance. It is applied to individual branches within the 'tree', and presents the likelihood, or probability, as a percentage. A high value (generally taken as >70%) indicates that the sequence data support the hypothesis that members of this particular group are monophyletic – in other words, they share a common ancestor. So for example, and using the well-known species pair of Icterine *H. icterina* and Melodious Warblers *H. polyglotta* (see fig. 13 on page 296), the support for that pairing is 96%, i.e. extremely strong support for the view that they are indeed each other's closest relatives. In the same figure, we see that support for the branch uniting Upcher's *H. languida* and Olive-tree Warblers *H. olivetorum* is less strong, though still quite good, at 75%. The data also indicate that these four taxa form a single monophyletic group within the *Hippolais* warblers, with statistical support of 94%. So, we can make the following conclusions: that Icterine and Melodious Warblers are each other's closest relatives; that Upcher's and Olive-tree Warblers are similarly monophyletic; and that all four species form a biological grouping, or clade, within the warblers. This conclusion is based solely on molecular evidence, and is indepen-

dent of morphology, plumage, song or other characters. It is not *proof* of the relationship, but it is the best explanation of the sequence data, and it can be used in conjunction with observational data in determining taxonomic relationships.

Broadly speaking, the same sequence has been generated in both studies (Leisler *et al.* and Helbig & Seibold), so it should be possible to examine the results for comparable species. Unfortunately, the two groups of authors presented their data in a slightly different format. Furthermore, some of the sequences reported by Leisler *et al.* (1997) were in fact derived by A. J. Helbig while undertaking post-doctoral research, so the two studies are not completely independent. We can use both studies for internal analysis, but need to be careful when making comparisons between them.

The traditional arrangement of the Acrocephalus and Hippolais warblers

The 'traditional' arrangement of the *Acrocephalus* and *Hippolais* warblers in the Western Palearctic is based upon similarities in plumage, morphology and ecology, and these were incorporated by Voous (1977) in a widely accepted sequence of species. In order to express these relationships in a comprehensible manner, we have examined the Voous sequence and identi-



163. Olive-tree Warbler *Hippolais olivetorum*, Lesbos, Greece, May 1998. This species' closest relative is Upcher's Warbler *H. languida*; these two species, together with Melodious *H. polyglotta* and Icterine Warblers *H. icterina*, form a single monophyletic group within the genus *Hippolais* (see fig. 12).

fied six major groups, or clusters. These six groups are listed below, arranged largely according to the Voous list.

'Sedge warbler' group:

- Moustached Warbler *A. melanopogon* (including subspecies *melanopogon*, *albiventris* and *mimica*)
- Aquatic Warbler *A. paludicola* (monotypic)
- Sedge Warbler *A. schoenobaenus* (monotypic)

(This group also includes the Eastern Palearctic Streaked Reed Warbler *A. sorghophilus*.)

'Paddyfield warbler' group:

- Paddyfield Warbler *A. agricola* (including *septimus* – see below – and the Eastern Palearctic *tangorum*)
- Cape Verde Warbler *A. brevipennis* (monotypic)

(This group also contains the Eastern Palearctic Blunt-winged Warbler *A. concinens* and Black-browed Reed Warbler *A. bistrigiceps*.)

'Reed warbler' group:

- Blyth's Reed Warbler *A. dumetorum* (monotypic) [although Voous included this species with Paddyfield Warbler]
- Marsh Warbler *A. palustris* (monotypic)
- Eurasian Reed Warbler *A. scirpaceus* (including *scirpaceus*, *fuscus* and *avicenniae* – unless *avicenniae* forms a part of African Reed Warbler *A. baeticatus* – and other subspecies in the Afrotropical Region)

(This group also contains African Reed Warbler, with subspecies *guiersi*, and possibly *cinnamomeus* if this is not a full species.)

'Great reed warbler' group:

- Clamorous Reed Warbler *A. stentoreus* (including *stentoreus*, *levantina* and *brunnescens* breeding in the Palearctic; plus *australis*, restricted to Australia and adjacent islands, and several other extralimital forms resident in southern Asia, Philippines and Indonesia)
- Great Reed Warbler *A. arundinaceus* (including *arundinaceus*, *zarudnyi* and *griseldis* which breed within the Western Palearctic, plus *orientalis* which breeds in the Eastern Palearctic)
- Thick-billed Warbler *A. aedon* (possibly including *stegmanni*, though see Roselaar in Cramp 1992)

'Olivaceous warbler' group:

- Olivaceous Warbler *H. pallida* (including *pallida*, *opaca*, *elaieica*, *reiseri* and *laeneni*)
- Booted Warbler *H. caligata* (including *caligata* and *rama*)

'Icterine warbler' group:

- Upcher's Warbler *H. languida* (monotypic)
- Olive-tree Warbler *H. olivetorum* (monotypic)
- Icterine Warbler *H. icterina* (monotypic)
- Melodious Warbler *H. polyglotta* (monotypic)

Examination of the six major groups

Having thus divided the *Acrocephalus* and *Hippolais* warblers into six main groups, we will now review these in detail. The molecular results are discussed initially, followed by data on morphology, vocalisations and behaviour. As there are few other studies of *Acrocephalus* or *Hippolais* warblers available for comparison, we have been compelled to compare the molecular results with the closest available species, such as members of the genus *Phylloscopus*. Our taxonomic recommendations are summarised at the end of each section, and together in Appendix 1.

Of these groupings, only the 'icterine warbler' group is relatively straightforward as there is little dispute about the taxonomic relationships within it. The results from this group

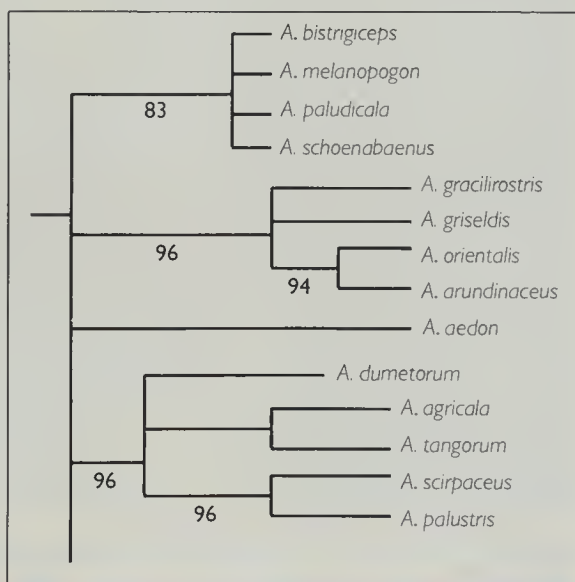


Fig. 1. Phylogenetic relationships within and between the 'sedge warbler', 'great reed warbler' and 'paddyfield warbler' groups (from Helbig & Seibold 1999). The figure is based upon Neighbour-joining analysis; numbers refer to percentage statistical (bootstrap) support for branches (see text for details).

can thus be used as a yardstick against which other, more controversial, taxa can be assessed in the other groups (as recommended by Helbig *et al.* 2002). Within the *Acrocephalus*, the distinctions between some species are less clearly defined. The genetic distances between taxa are, in some cases, significantly less than those between species in the 'icterine warbler' cluster. An outline of the phylogenetic relationships within the *Acrocephalus*, based on Helbig & Seibold 1999, is shown in fig. 1.

'Sedge warbler' group

Molecular data

Helbig & Seibold (1999) showed that the streaked *Acrocephalus* warblers are not especially closely related to the genus *Locustella*, despite superficial similarities in plumage and ecology. It is possible to calculate genetic 'distance' between the taxa in this group, based on the proportion of the sequence that differs between two individuals. The results suggest that Sedge Warbler, Moustached Warbler and Aquatic Warbler differ from each other by about 8%, a level similar to that between the members of the 'icterine warbler' group, and form a single, well-

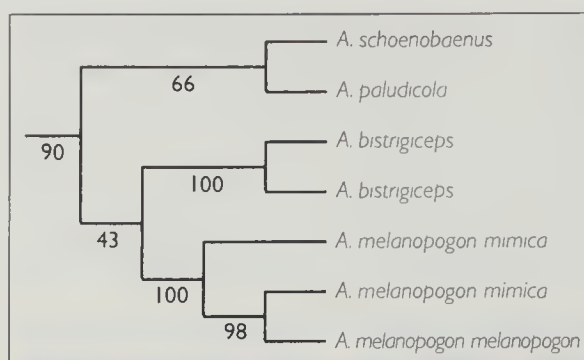


Fig. 2. Phylogenetic relationships within the 'sedge warbler' group (from Leisler *et al.* 1997). The figure is based upon Neighbour-Joining analysis; numbers refer to percentage statistical (bootstrap) support for branches (see text for details).

supported clade. Their molecular data are not, however, sufficiently well differentiated to resolve the relationships within the clade, except that two subspecies of Moustached Warbler, nominate *melanopogon* and *mimica*, show only very slight differences in DNA, and are sister taxa. Leisler *et al.* (1997) reported essentially similar results (see fig. 2). Subspecies *albiventris* was not examined in either study, nor was the extralimital Streaked Reed Warbler from the Eastern Palearctic, although it presumably falls



Fig. 3. Map showing breeding distribution of the 'sedge warbler' group: for details of species and subspecies, see key (inset).

within this group, and Black-browed Reed Warbler is also a member of this clade, despite its differences in plumage (see discussion in 'paddyfield warbler' group).

Recommendations

No changes are necessary, since the four studied taxa (Sedge Warbler *A. schoenobaenus*, Moustached Warbler *A. melanopogon*, Aquatic Warbler *A. paludicola* and Black-browed Reed Warbler *A. bistrigiceps*) form clearly separate species, diagnosable by plumage, morphology and acoustics. The molecular data support this, and also indicate that Black-browed Reed Warbler is part of this group.

'Paddyfield warbler' group

Before discussing this cluster, it is necessary to clarify the use of the name '*brevipennis*' to prevent later confusion. When originally described, Cape Verde Warbler was named *Calamodyta brevipennis*, at a time when this species was not regarded as a member of the genus *Acrocephalus*. Subsequently, the name *brevipennis* was also used to describe a subspecies of Paddyfield Warbler which occurred

from the Black Sea coast, east through Ukraine and Central Asia to Iran, Mongolia and western China. When Cape Verde Warbler was transferred to *Acrocephalus*, the name *brevipennis* was no longer available for that particular subspecies of Paddyfield Warbler, and it was renamed *A. agricola septimus*. This form is probably not separable from nominate *agricola* (Williamson 1960), but the two forms are included in some of the analyses reported below.

Molecular data

Helbig & Seibold (1999) examined specimens of Paddyfield Warbler belonging to both subspecies, *agricola* and *septimus*. Their molecular data show that the genetic distance between these two, based on the proportion of bases that differ between their DNA sequences, is only about 0.2%. This is well within the range for different geographic populations of a single species, and somewhat below that recorded for many passerine subspecies. For example, in Common Chiffchaff *P. collybita*, the subspecies *collybita* and *abietinus* differ by about 1% (Helbig *et al.* 1996). On this basis, there is no



Fig. 4. Map showing breeding distribution of the 'paddyfield warbler' group: for details of species, see key (inset).



164. Sedge Warbler *Acrocephalus schoenobaenus*, New Hythe, Kent, April 1996. This is one of three species of small, streaked *Acrocephalus* warbler which occurs in the Western Palearctic, the others being Moustached Warbler *A. melanopogon* and Aquatic Warbler *A. paludicola*. The 'sedge warbler' group also includes Streaked Reed Warbler *A. sorghophilus* and Black-browed Reed Warbler *A. bistrigiceps*, of the Eastern Palearctic.

molecular justification for separating *septimus* and *agricola* (see fig. 5).

Blunt-winged Warbler was not examined by Helbig & Seibold (1999), but Manchurian Reed Warbler *A. tangorum*, previously regarded by some authorities as an eastern race of Paddyfield Warbler, showed c. 7.5% divergence from *agricola/septimus*. This is greater than that observed between Icterine and Melodious Warblers (see below), and among various chiffchaff species including Common, Iberian, *P. ibericus*, Canary Islands *P. canariensis*, and Mountain *P. sindianus*, and similar to that among the trio comprising Wood Warbler *P. sibilatrix*, Eastern Bonelli's Warbler *P. orientalis* and Western Bonelli's Warbler *P. bonelli* (Helbig *et al.* 1995, 1996). This degree of difference supports the treatment of *tangorum* and *agricola/septimus* as separate species (Helbig *et al.* 2002).

Previously, Black-browed Reed Warbler has been considered to be conspecific with both *agricola* (Vaurie 1959) and *tangorum* (Williamson 1960). Helbig & Seibold (1999) found genetic differences in excess of 9.5% between Black-browed Reed and both *tangorum* and *agricola*, which are at variance with these earlier views, and indicate that these three are distinct species. Indeed, Black-browed Reed Warbler appears to be more closely allied to the 'sedge warbler' group (see above and fig. 1). Cape Verde Warbler was not examined by

Helbig & Seibold (1999).

Molecular data from Leisler *et al.* (1997) show two sister groups (see fig. 6): *septimus* with *agricola* (4.5% difference), and *tangorum* with *concinens* (5.6% difference). The former statistic is strikingly different from that of 0.2% determined by Helbig & Seibold (1999). Leisler *et al.* (1997) suggest that *septimus* and *agricola* are conspecific, but that *tangorum* and *concinens* are separate species. While the first of these conclusions is likely to be correct (from Helbig & Seibold 1999), their data fail to support such differential treatment of the two sister groups. There must be some confusion here but, since they have not published the raw data, it is difficult to say where this may have arisen. The absence of voucher specimens precludes checking the identification of the specimens sampled. Their phylogenetic tree (fig. 6) shows the arms of these two clades to be of similar depth, however, suggesting that the discrepancy has not arisen through a simple typographical error. Leisler *et al.* (1997) reported large differences between *bistrigiceps* and *tangorum* (9.4%), and between *bistrigiceps* and *agricola* (10.3%), findings which support those of Helbig & Seibold (1999) that these are three distinct species (Black-browed Reed Warbler, Manchurian Reed Warbler and Paddyfield Warbler); but the problems relating to *agricola* and *septimus* outlined above leads us to treat

their findings with caution.

Cape Verde Warbler seems to be quite distinct from both the 'paddyfield warbler' and the 'reed warbler' groups. Leisler *et al.* (1997) reported that it forms a sister group with Greater Swamp Warbler *A. rufescens*, based upon a genetic distance of 2.2%, but also with Seychelles Brush Warbler *A. sechellensis*, in terms of morphology (despite the fact that Seychelles Brush Warbler was formerly placed within the genus *Bebrornis*). A difference of 2.2% is approximately the level at which subspecies are differentiated in *Phylloscopus* warblers, however, and thus the results may not indicate clear separation from Greater Swamp Warbler. Although Cape Verde Warbler is diagnosably distinct from Eurasian Reed Warbler on wing and leg length (Baker 1997, Cramp 1992), it is closer to Greater Swamp Warbler (Leisler *et al.* 1997) in plumage and, especially, vocalisations (Dowsett-Lemaire 1994, Hazevoet 1995). The molecular data indicate that these taxa may be conspecific but, as suggested by Dowsett & Dowsett-Lemaire (1993), a more detailed investigation of the position of Cape Verde Warbler is called for. The link with Greater Swamp Warbler seems more logical based upon geographical proximity, and similarities with Seychelles Brush Warbler may be due to anatomical convergence in an arid woodland or scrub habitat.

Morphology

Vaurie (1959) regarded the forms *agricola*, *brevipennis* (now *septimus*) and *tangorum* as subspecies of Paddyfield Warbler, with only slight variations in colour that might be clinal. Williamson (1960) and Baker (1997) discussed the identification of these taxa in the field and in the hand. Kennerley & Leader (1992) provided a valuable summary of the identification of eastern species. There seem to be few, if any, consistent and diagnosable differences in morphology between *agricola* and *septimus* (Cramp 1992; Svensson 1992) and, bearing in mind they are virtually identical in molecular terms, we regard *septimus* as a synonym of *agricola*. The eastern taxon, *tangorum*, is diagnosably distinct from *agricola* on plumage characters, but not on biometrics.

Recommendations

The taxa *agricola*, *tangorum*, *concinens* and *bistrigiceps* are largely allopatric, but coexist in some regions of eastern China, and are diagnosably different from each other on a combination of plumage characters and biometrics. They show molecular differences at a level similar to related taxa known to be specifically distinct (e.g. Icterine and Melodious Warblers). All four can, therefore, be regarded as distinct at the species level based upon the criteria outlined by Helbig *et al.* (2002). Paddy-



Tim Loseby

165. Paddyfield Warbler *Acrocephalus agricola*, Fair Isle, Shetland, September 1997. Paddyfield Warbler is now treated as a monotypic species within a group which also includes Blunt-winged Warbler *A. concinens* and Manchurian Reed Warbler *A. tangorum*.

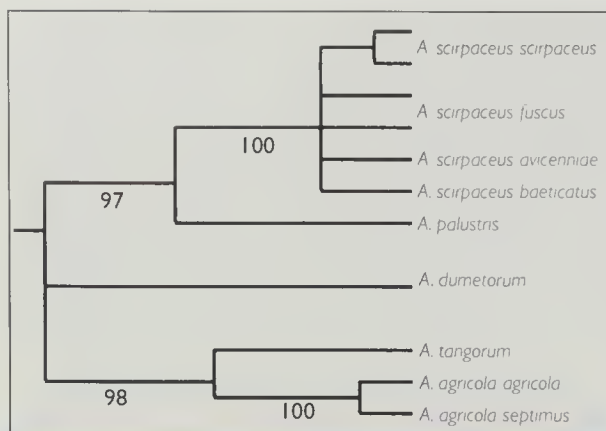


Fig. 5. Phylogenetic relationships within and between the 'paddyfield warbler' and 'reed warbler' groups (from Helbig & Seibold 1999). The figure is based upon Neighbour-Joining analysis; numbers refer to percentage statistical (bootstrap) support for branches (see text for details).

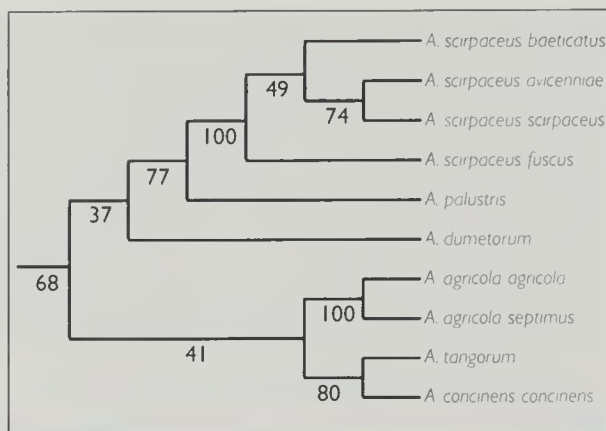


Fig. 6. Phylogenetic relationships within and between the 'paddyfield warbler' and 'reed warbler' groups (from Leisler et al. 1997). The figure is based upon Neighbour-Joining analysis; numbers refer to percentage statistical (bootstrap) support for branches (see text for details).

field Warbler *A. agricola* is now treated as a monotypic species, with *tangorum* considered to be a species in its own right, Manchurian Reed Warbler *A. tangorum* (also monotypic). Black-browed Reed *A. bistrigiceps* and Blunt-winged Warblers *A. concinens* are both regarded as distinct species on morphological and molecular grounds. The former species is monotypic, but the latter is currently separated into three races (*concinens*, *stevensi* and *haringtoni*). The genetic studies of Leisler et al.

(1997) used birds sampled in Thailand, presumably of the nominate race, which breeds in China and is migratory. In view of the differentiation in this group, it would be interesting to analyse the other two races, especially the isolated form *haringtoni* from Afghanistan, northern Pakistan and Kashmir. Cape Verde Warbler *A. brevipennis* may be conspecific with Greater Swamp Warbler *A. rufescens*, but further investigation is needed.

Lars Svensson



166. Thick-billed Warbler *Acrocephalus aedon*, Selenga Delta, June 2002. We recommend that Thick-billed Warbler is treated as a monotypic species; the racial differences which have been described previously are very slight.

'Reed warbler' group

Molecular data

There is haplotype variation in the mitochondrial-DNA (mtDNA) sequence among various subspecies of Eurasian Reed Warbler, including nominate *scirpaceus* (in Europe east to Ukraine), *fuscus* (Middle East to Central Asia and western China) and *avicenniae* (southern Red Sea), plus *baeticatus* (sub-Saharan Africa), the latter treated by most authorities as a separate species, African Reed Warbler. Whether these differences are fixed between the taxa, especially between *scirpaceus* and *fuscus*, which are in geographic contact, cannot be assessed with the small sample sizes studied so far. Consequently, they are not diagnosable on the basis of data presently available (Helbig & Seibold 1999), and the genetic distances among them are very small. The four taxa form a strongly supported clade (see fig. 5), but closer phylogenetic relationships cannot be resolved with any certainty. Their divergence (2%) is comparable with subspecies differentiation in *Phylloscopus* warblers and in Moustached Warbler. Nominate *scirpaceus* is slightly more differentiated from the rest, but statistical (bootstrap) support for



Peter Kennerley

167. Moustached Warbler *Acrocephalus melanopogon*, of the subspecies *mimica*, Göksu Delta, Turkey, May 1998. Although this race differs from the nominate subspecies, *melanopogon*, by the colder, duller tones to the upperparts and whiter underparts, it shows only slight differences in DNA, and the two are regarded as conspecific.

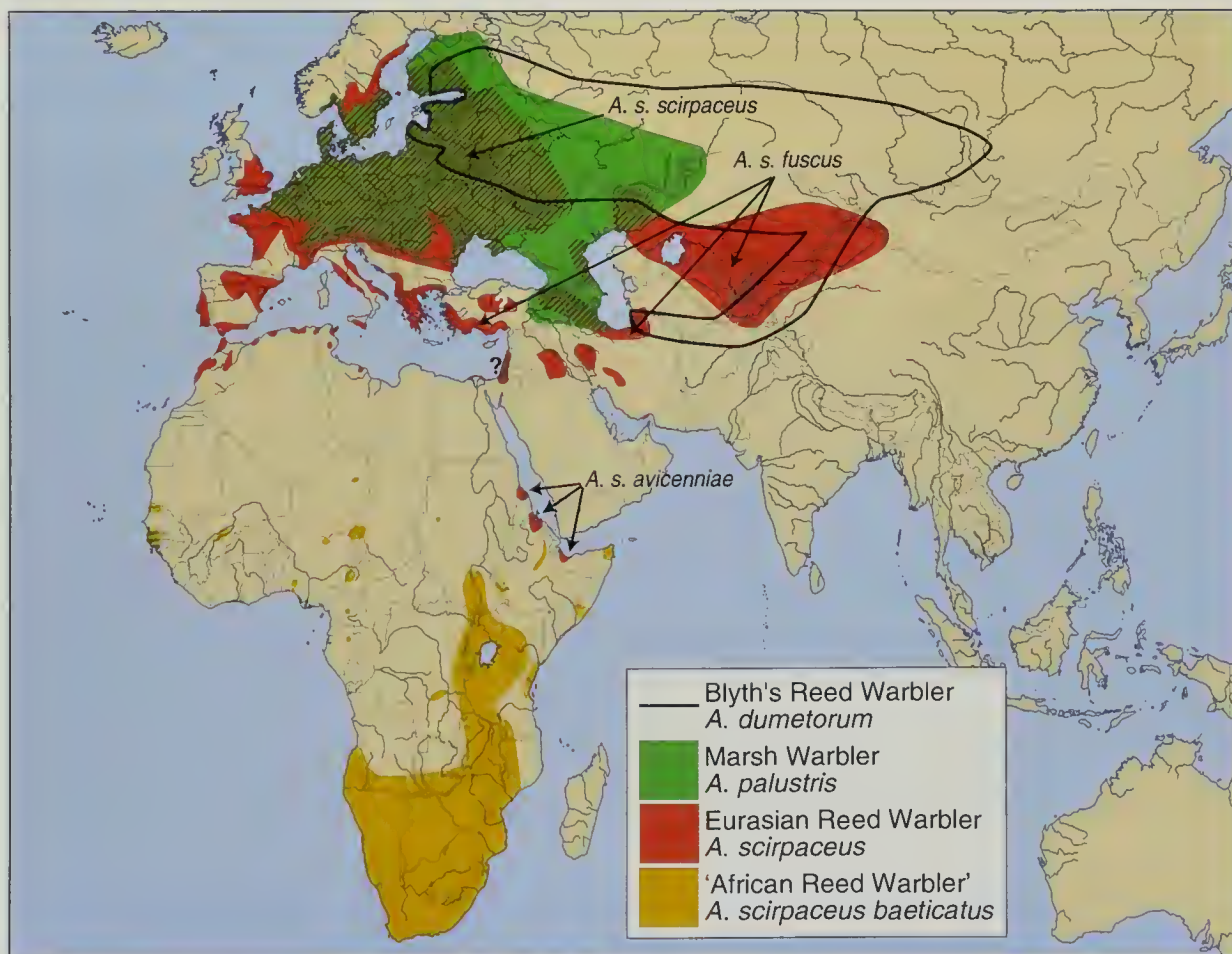


Fig. 7. Map showing breeding distribution of the 'reed warbler' group: for details of species and subspecies, see key (inset).

this was low, and *baeticatus* is not consistently divergent from *scirpaceus*, *fuscus* or *avicenniae* (1.4-2.4%). This single *baeticatus/scirpaceus* clade is also reported by Leisler *et al.* (1997); they suggested that *avicenniae* and *scirpaceus* are sister taxa, which are most closely related to *baeticatus* and then to *fuscus* (fig. 6), but statistical support for these relationships is again low. Their genetic differences range between 2% and 4%, and it must be concluded that the four taxa are evolutionarily very close.

Marsh Warbler and Blyth's Reed Warbler have long been regarded as closely related, and hybridise occasionally in Finland (Koskimies 1991). Helbig & Seibold (1999) found that Marsh Warbler is, in fact, closer to Eurasian Reed Warbler (see fig. 5), and that Blyth's Reed Warbler was more distinct, although their molecular data could not resolve whether Blyth's Reed was closer to the 'reed warbler' group or the 'paddyfield warbler' group. Leisler *et al.* (1997) came up with broadly the same result (fig. 6); Marsh Warbler is close to, but distinct from, the rest of the 'reed warblers', while Blyth's Reed is more loosely associated with the Eurasian Reed/Marsh Warbler clade.

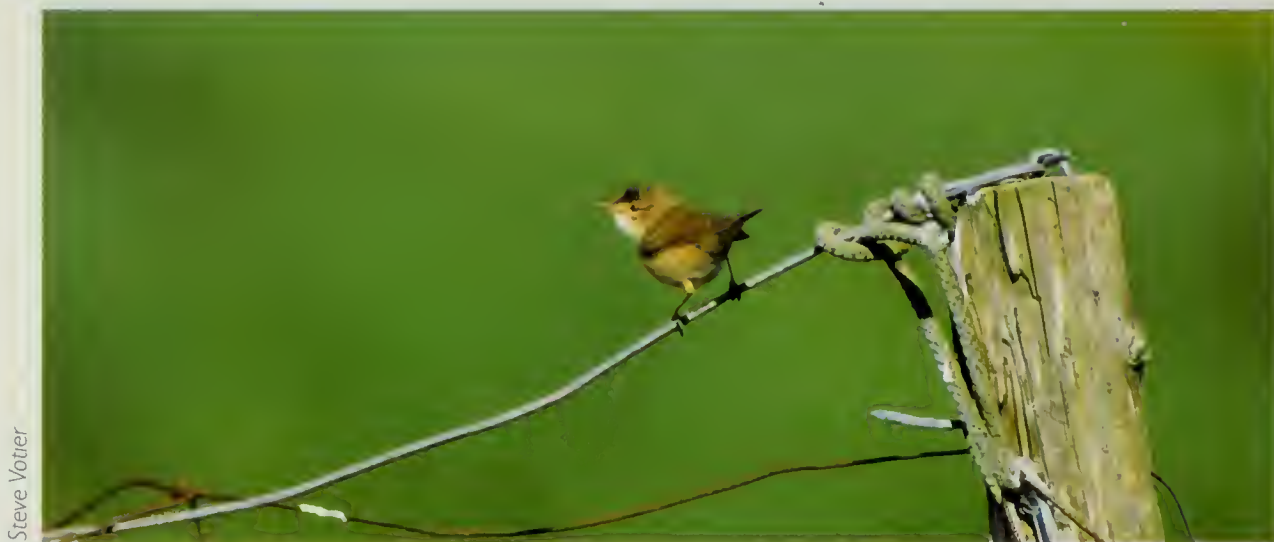
Morphology

Leisler *et al.* (1997) presented a statistical analysis, based on morphology, to show that *avicenniae*, *baeticatus*, *concinens* and *tangorum* form a clade, well separated from *arundinaceus* and *orientalis* of the 'great reed warbler' group. Many of their data are likely to be correlated,

however, and some clustering may have occurred owing to convergent evolution for similar habitat or behaviour, rather than genuine phylogenetic affinity. This is all rather confusing, but convergence due to similar ecology can always be a problem with biometric data. For example, migrant species tend to have longer and more pointed wings, which affects wing formula and primary projection, characters which are widely used for in-hand identification. Unfortunately, Leisler *et al.* (1997) do not give any indication of the variation within taxa, so points on their graphs which appear distinct may be less convincing when larger samples are plotted.

African Reed Warbler differs in size from Eurasian Reed Warbler, being smaller, with shorter and more rounded wings: in the former, the second primary (P2) is shorter than P6 (Zimmerman *et al.* 1996), while in Eurasian Reed Warbler, the length of P2 usually falls between that of P3 and P5 (Svensson 1992) (primaries numbered ascendantly). These differences may be a result of migratory behaviour, however, since African Reed Warbler is generally a short-distance migrant or resident, whereas most of the other members of the 'reed warbler' group are long-distance migrants.

Dowsett-Lemaire & Dowsett (1987) examined the morphology and vocalisations of Eurasian Reed and African Reed Warblers (including *cinnamomeus* from north-central Africa). They reported that the two taxa overlap in general coloration to the extent that plumage



Steve Votter

168. Marsh Warbler *Acrocephalus palustris*, Foula, Shetland, June 2002. Marsh Warbler is retained as a distinct, monotypic species within the 'reed warbler' group. Despite the fact that Marsh Warbler occasionally hybridises with Blyth's Reed Warbler *A. dumetorum* in areas where the two overlap (such as Finland; Koskimies 1991), Helbig & Seibold (1999) found that Marsh Warbler is closely related to Eurasian Reed Warbler *A. scirpaceus*, while Blyth's Reed Warbler is more distinct.

is not diagnostic. They suggest that the only reliable differences are size and wing length, although as established above, the latter varies geographically and may reflect migratory behaviour. They were not able to differentiate among the taxa on the basis of habitat type. Playback experiments in Europe and Africa, using the songs of Marsh and Blyth's Reed Warblers as controls, showed that the songs of Eurasian Reed and African Reed Warblers are strikingly similar. Their findings are quite conclusive: recordings of *scirpaceus*, *baeticatus* and *cinnamomeus* provoked a strong and uniform reaction among territorial males of all three taxa. By contrast, the control species in their experiment failed to respond with any degree of vigour. On the strength of these results, Dowsett-Lemaire & Dowsett (1987) recommended that African Reed Warbler (including *cinnamomeus*) be merged with Eurasian Reed Warbler into a single polytypic species.

Pearson *et al.* (2002) discussed the plumage similarities and differences shown by Eurasian Reed Warblers of the nominate form and *fuscus*. They concluded that size and colour are both clinal, with birds being larger in size, but less saturated in colour towards the east of the range. In addition, *fuscus* is variable in phenotype, ranging in colour from grey-brown to warm rufous-brown, but only the greyest indi-

viduals are distinguishable from nominate *scirpaceus*. The breeding distribution of these phenotypes is little known, but they coexist in winter in parts of East Africa. Kennerley & Small (in Dunn 2001) comment on a record of a possible *fuscus* in Britain in 2001. They considered that there are no field characters which can be used, either singly or in combination, to distinguish *fuscus* from nominate *scirpaceus*, i.e. they are not diagnosable in the field (*contra* Sangster *et al.* 1999). The relative distributions of these two taxa in Turkey are not clear (Rose-laar 1995 and pers. comm.), a problem which merits further research. Further investigation into the extent of molecular differentiation across the breeding ranges of *scirpaceus*, *fuscus*, *avicenniae* and the entire African Reed Warbler complex, and the precise evolutionary position of Blyth's Reed Warbler, is also required.

Recommendations

Blyth's Reed Warbler *A. dumetorum* and Marsh Warbler *A. palustris* are both retained as distinct monotypic species. Eurasian Reed Warbler *A. scirpaceus* is treated as a single polytypic species with three subspecies (*scirpaceus*, *fuscus* and *avicenniae*) in the Western Palearctic. Research on vocalisations suggests that Eurasian Reed Warbler and African Reed Warbler *A. baeticatus* are also conspecific, and that the limited mor-



J. Hollis/Windrush

169. Eurasian Reed Warbler *Acrocephalus scirpaceus*, Kent, May, year unknown. Eurasian Reed Warbler is treated as a single polytypic species, encompassing three subspecies in the Western Palearctic – *scirpaceus*, *fuscus* and *avicenniae* (which is restricted to mangroves fringing the southern Red Sea; see fig. 7) – together with the extralimital *baeticatus* ('African Reed Warbler') and other taxa in the Afrotropical region.

phological differences between the two might be related to their different migratory behaviours. We urge that a more intensive molecular and morphological analysis of this whole 'reed warbler' complex across Africa and Eurasia should be undertaken.

It is worth commenting here on the Large-billed Reed Warbler *A. orinus*, which is known from a single specimen, collected in Himachal Pradesh, India, (31°26'N 77°37'E) on 13th November 1867. Vaurie (1959) suggested that it was related to Blunt-winged and Paddyfield Warblers, while Williamson (1960) made a best guess that it represents a rare and isolated form of Clamorous Reed Warbler, although there is also the possibility that it is some form of hybrid. The specimen has recently been reassessed by Bensch & Pearson (2002) using both biometric and DNA sequence data. They had difficulty in isolating DNA from the specimen, perhaps because of its age and degradation, but the sequence they obtained placed it firmly within the small unstreaked *Acrocephalus* warblers, and clearly separate from the 'great reed warbler' group. It was most similar to Blyth's Reed Warbler, but still differed from this by

7.8%, close to the differences between full species of *Acrocephalus* warblers and indicating that *orinus* merits specific status. Its breeding range is unknown, and, as noted by Bensch & Pearson (2002), it has 'existed in the taxonomic shadow lands for more than a century'. Other specimens may lie in collections around the world, and indeed it may still exist in the wild... a real challenge for contemporary birders!

'Great reed warbler' group

Molecular data

Helbig & Seibold (1999) showed higher levels of differentiation within the 'great reed warbler' group than among members of the 'reed warbler' group. These results (see fig. 9) show that taxa previously treated as subspecies of Great Reed Warbler, including the Palearctic forms *griseldis* (Basra Reed Warbler) and *orientalis* (Oriental Reed Warbler), are, in fact, clearly differentiated.

The widely distributed Clamorous Reed Warbler has three races occurring in the Palearctic: nominate *stentoreus* from wetlands in northern Egypt; *levantina* in northern Israel; and *brunnescens* in the Transcaspiian and Aral

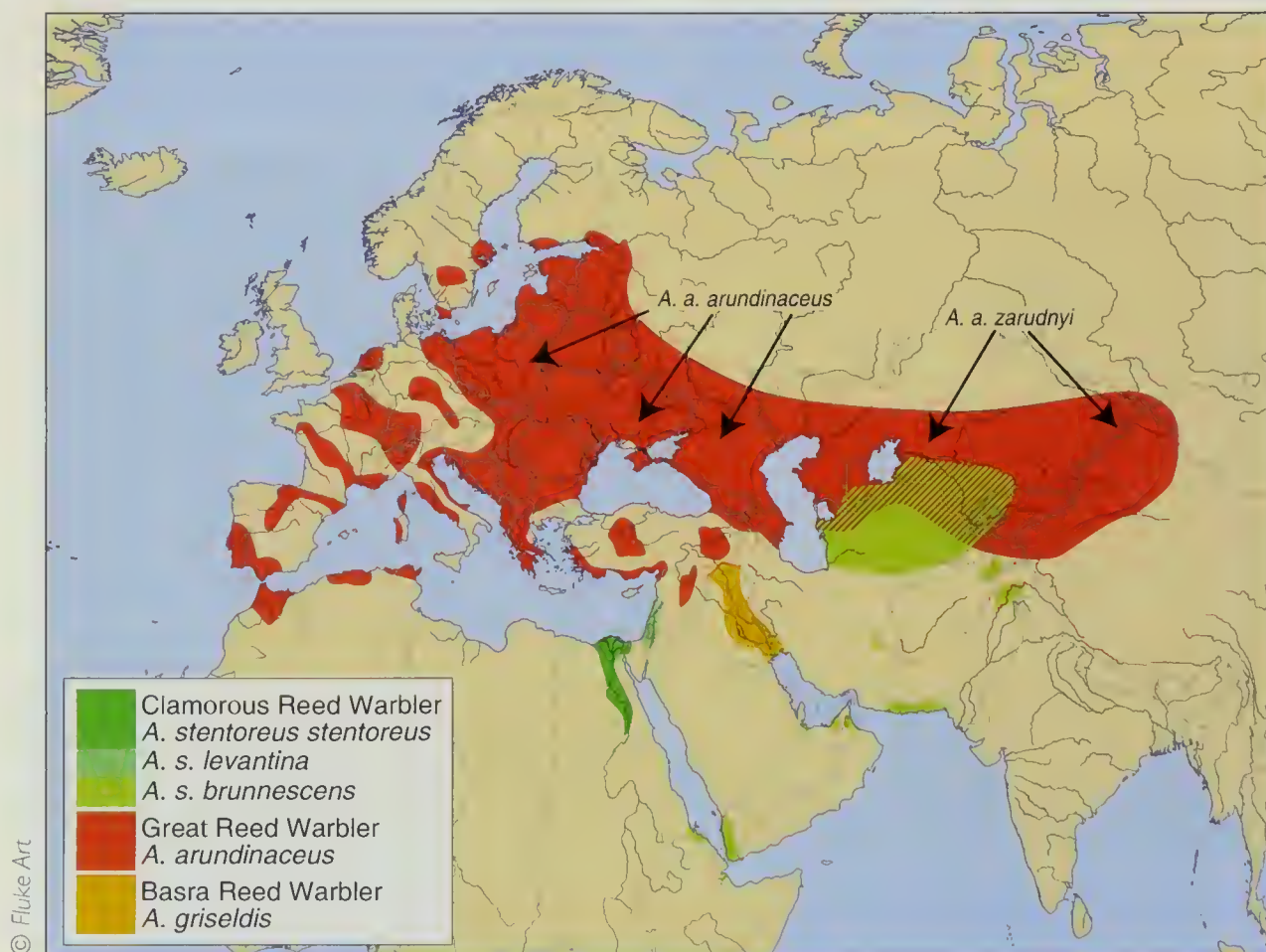


Fig. 8. Map showing breeding distribution of the 'great reed warbler' group: for details of species and subspecies, see key (inset).

Sea regions of Turkmenistan and Kazakhstan to Afghanistan and the Vale of Kashmir, India, with an isolated extralimital population inhabiting mangroves bordering the Red Sea coast in southwest Saudi Arabia, Sudan, Eritrea and islands off northwestern Somalia. They show c.1% divergence, indicating that this is likely to be the most appropriate arrangement, while *harterti*, an extralimital race restricted to the Philippines, is slightly more differentiated. The taxon *australis* (extralimital, and traditionally a subspecies of *stentoreus*) is more divergent in sequence, and would appear to warrant specific rank. Detailed knowledge of the other extralimital forms across Southeast Asia is still lacking, and this prevents us from making any comment about the relationships of these eastern taxa.

Three African species, Lesser Swamp Warbler *A. gracilirostris*, Madagascan Swamp Warbler *A. newtoni* and Seychelles Brush Warbler were included in the analysis by Helbig & Seibold (1999), but are all extralimital. They do, however, form a well-supported clade, clearly separate from the 'great reed warbler' cluster (see fig. 9).

Morphology

The identification of the Palearctic members of this group has been discussed in detail by Shir-

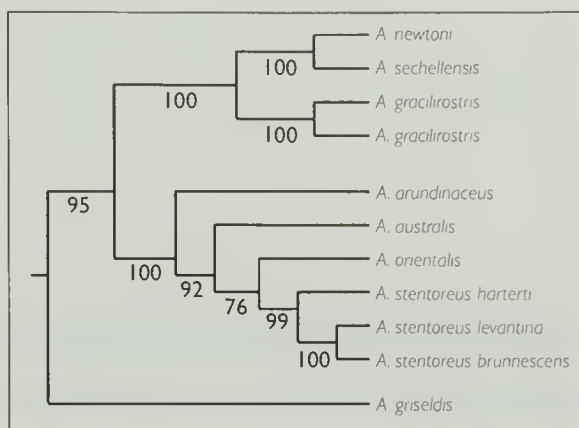


Fig. 9. Phylogenetic relationships within the 'great reed warbler' group (from Helbig & Seibold 1999). The figure is based upon Neighbour-Joining analysis; numbers refer to percentage statistical (bootstrap) support for branches (see text for details).

ihai *et al.* (1995) and Harris *et al.* (1996). Clamorous Reed and Great Reed Warblers (including *griseldis* and *orientalis*), along with the highly distinctive Thick-billed Warbler, are separable in the field and in the hand. Their vocalisations are distinct to those who have experience with these species. The form *griseldis* is apparently marginally sympatric with *arundinaceus* (and parapatric with Clamorous Reed Warbler); these three taxa are morphologically diagnosable on wing formula and wing/tail ratios which, together with their significantly different



William Laird

170. Great Reed Warbler *A. arundinaceus*, Eilat, Israel, May 1990. Great Reed Warbler is, like Clamorous Reed Warbler *A. stentoreus*, treated as a polytypic species, with two subspecies, *arundinaceus* and *zarudnyi*, occurring in the Western Palearctic (fig. 8). At a species level, the long primary projection, the heavy, blunt-tipped bill and the strong supercilium are key characters distinguishing this species from Clamorous Reed Warbler (see plate 162).

mtDNA, supports their treatment as separate species. The form *orientalis* is allopatric with *arundinaceus*, and diagnosably distinct from this and *zarudnyi* (which breeds in southern Siberia and central Asia). Farther east, *orientalis* breeds throughout much of China and is partly sympatric with Clamorous Reed Warbler of the subspecies *amyae*, which is confined to south-west China, where these taxa may not be fully diagnosable as a result of intergradation (Cramp 1992). As *zarudnyi* is not diagnosably distinct from nominate *arundinaceus*, these two taxa should continue to be treated as races of Great Reed Warbler.

Recommendations

Clamorous Reed Warbler *A. stentoreus* should be treated as a single polytypic species, with three subspecies (*stentoreus*, *levantina* and *brunnescens*) breeding in the Palearctic. Great Reed Warbler *A. arundinaceus* (including *zarudnyi*), Basra Reed Warbler *A. griseldis*, Oriental Reed Warbler *A. orientalis* and Thick-billed Warbler *A. aedon* are treated as separate species. Australian Reed Warbler *A. australis*, traditionally treated as a subspecies of Clamorous Reed

Warbler, should also be regarded as a separate species, particularly considering its non-sister relationship with *stentoreus*, although it remains unclear which, if any, of the isolated races of Clamorous Reed Warbler occupying islands within the Wallacean sub-region, Papua New Guinea and the Bismark archipelago should be included within Australian Reed Warbler.

'Olivaceous warbler' group

Molecular data

Traditionally, this group has been regarded as comprising two species: Olivaceous Warbler, including the subspecies *pallida*, *opaca*, *elaeica*, *reiseri* and *laeneni*, and Booted Warbler, including the subspecies *caligata* and *rama*. Molecular analysis (Helbig & Seibold 1999) has shown that *elaeica*, *opaca*, *caligata* and *rama* differ by 6-11%, genetic divergence as large as that between taxa known (on non-molecular grounds) to be of species status (such as those within the 'paddyfield', 'great reed' and 'icterine' warbler groups. Helbig & Seibold established that *caligata* and *rama* form a strongly supported clade and, similarly, *elaeica* and *opaca* are also sister taxa, but less strongly supported



Fig. 10. Map showing breeding distribution of the 'olivaceous warbler' group: for details of species and subspecies, see key (inset).

(see fig. 11). All of these genetic differences are as large as, or larger than, those found between Icterine and Melodious Warblers, and support the separation of the various taxa as distinct species. The forms *pallida*, *reiseri* and *laeneni* were not included in their analyses.

Morphology

The most detailed and critical reviews are those of Svensson (2001, 2003). He considered this group to comprise seven taxa, although only four, *opaca*, *elaieca*, *rama* and *caligata*, are directly comparable using existing molecular studies. Svensson discusses identification (diagnosability) in the field, in the hand and through vocalisations, but demonstrates that plumage is not completely diagnostic. It appears that there is overlap between many taxa, so that while two taxa may be diagnosably distinct, there may be a third that shows intermediate characters, and overlaps with both. There are also some pairs which coexist in the field, and show fine differences in structure, plumage and/or song.

Olivaceous Warblers from the central and eastern parts of the breeding range (comprising the forms *pallida*, *elaieca*, *reiseri* and *laeneni*), and *opaca* from the western Mediterranean all have long, strong bills; *opaca* has a particularly long, broad bill, typically (95% of individuals) with convex or bulging sides, while *elaieca*, *pallida* and *reiseri* have longish, more or less straight-sided bills, not distinctively different

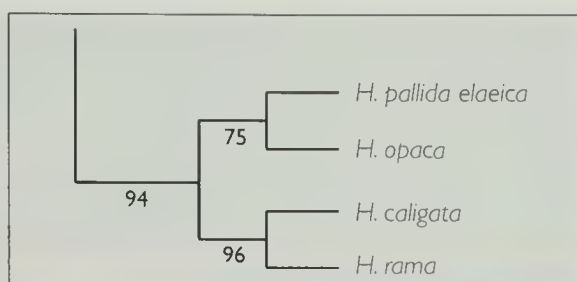


Fig. 11. Phylogenetic relationships within the 'olivaceous warbler' group (from Helbig & Seibold 1999). The figure is based upon Neighbour-joining analysis; numbers refer to percentage statistical (bootstrap) support for branches (see text for details).

from that of *rama*. Several of the eastern forms of Olivaceous Warbler, including *elaieca*, characteristically dip their tails, which *opaca* is not known to do. In addition, *pallida* and *reiseri* frequently show a light panel in the wing formed by pale fringes to the secondaries, and although not as distinct as that of either Olive-tree Warbler or Upcher's Warbler, this feature is invariably absent in *opaca*. In North Africa, *opaca* and *reiseri* are certainly parapatric, and perhaps even sympatric, where their ranges meet in northern Algeria (Svensson unpublished data). Furthermore, there are no specimens showing intermediate characters in collections, suggesting some reproductive isolation. Behaviour and pair formation in the zone of contact, and vocalisation playback results, are unknown, however, and this merits further study.



Lars Svensson

171. Eastern Olivaceous Warbler *Hippolais pallida elaeica*, Eilat, Israel, March 1993. At present, a combination of molecular and observational data supports the division of the taxa within the 'olivaceous warbler' group into four species. Of these, Western Olivaceous *H. opaca*, Booted *H. caligata* and Sykes's Warbler *H. rama* are all monotypic, while Eastern Olivaceous Warbler is treated as a polytypic species with four subspecies – *pallida*, *elaieca*, *reiseri* and *laeneni* – all of which occur in the Western Palearctic. It is clear, however, that more work on this group is required, and this may result in further modifications to our treatment of its taxonomic affinities.

Lars Svensson

172. Western Olivaceous Warbler *Hippolais opaca*, Oued Sous, Agadir, Morocco, April 2001.

Roger Riddington



Roger Riddington



173 & 174. Eastern Olivaceous Warbler *Hippolais pallida* (above) and Western Olivaceous Warbler *H. opaca* (below), Gambia, February 1996. These photos show the distinct difference in bill structure between these two species. Western Olivaceous has a much broader, heavier bill, with slightly convex edges, while that of Eastern Olivaceous is much slimmer, with the sides of the bill straight or even marginally concave when viewed from above.

The separation of *pallida* and *elaeica* can be extremely difficult, although *pallida* is generally browner, with some warm rufous tinges, while *elaeica* is a distinctly greyer-toned warbler. David Pearson (*in litt.*) has commented that: 'The wing formula differences between *pallida* and *elaeica* are slight, with individual overlap. Those between the smaller *laeneni* and *elaeica* are rather more distinct. Bill size and shape is pretty much the same in *pallida*, *reiseri*, *laeneni* and *elaeica*. The colour difference between *pallida* and *elaeica*, though subtle, seems to be consistent, with *pallida* being a bit buffier-brown, *elaeica* a bit greyer-brown. I have also handled *pallida* in autumn in coastal Sudan alongside *elaeica*, and they were reasonably easy to pick out, mainly on colour, but did not strike me from the morphology as a different species.'

Turning to Booted Warbler, *caligata* and *rama* differ slightly, but apparently consistently, in wing formula, primary projection, facial pattern and bill coloration. They are diagnosable in the hand, and, with difficulty, in the field (Svensson 2001, 2003). Small (2002) has suggested that bill shape may differ between these taxa, and illustrated these differences, but offers no quantitative data in support of this distinction. Svensson (2003) examined this further and suggests that bill shape is a good, but not infallible, character.

Comparison of vocalisations indicate that the songs of *pallida*, *opaca*, *rama* and *caligata* are diagnosable (Svensson 2001, 2003). The songs of *elaeica*, *pallida*, *reiseri* and *laeneni* are very similar indeed, and although playback

experiments have not been undertaken, it seems unlikely that they are diagnosably different.

Recommendations

Western Olivaceous Warbler *H. opaca*, Eastern Olivaceous Warbler *H. pallida* (including the subspecies *pallida*, *elaieca*, *reiseri* and *laeneni*), Booted Warbler *H. caligata* and Sykes's Warbler *H. rama* are treated as four separate species. In future, *pallida* and *elaieca* may also prove to be separate species, but there are presently no published data to support this. The four species are well separated in DNA sequence (although sequences for nominate *pallida* have not been published). Eastern and Western Olivaceous Warblers are diagnosable using plumage differences and behavioural characteristics; Eastern Olivaceous and Sykes's Warblers are possibly diagnosable using plumage and behaviour; and most Booted and Sykes's Warblers are diagnosable in the hand, and usually in the field, although there is some overlap and a minority may defy positive identification. Vocalisations are an important factor in the separation of all four species (Svensson 2001). Field separation of the various races of Eastern Olivaceous

Warbler is probably not possible for many individuals. Indeed, the race *laeneni* differs only marginally in size (from *pallida*), and may not be diagnosable (Svensson 2001). Further molecular and behavioural investigations into this group are continuing, and minor changes to this arrangement may be necessary.

'Icterine warbler' group

Molecular data

The molecular data of Helbig & Seibold (1999) allow a comparison between the DNA sequences of Icterine, Melodious, Olive-tree and Upcher's Warblers. These suggest that these four taxa differ by about 10%, apart from Icterine and Melodious which differ by about 6%. As demonstrated above, phylogenetic reconstruction (see fig. 13) indicates that Icterine and Melodious, and Olive-tree and Upcher's Warblers, form two sister groups, each of which is strongly supported.

Morphology

These four species are clearly diagnosable on structure, plumage colour, wing formula and vocalisations (Cramp 1992; Svensson 1992;

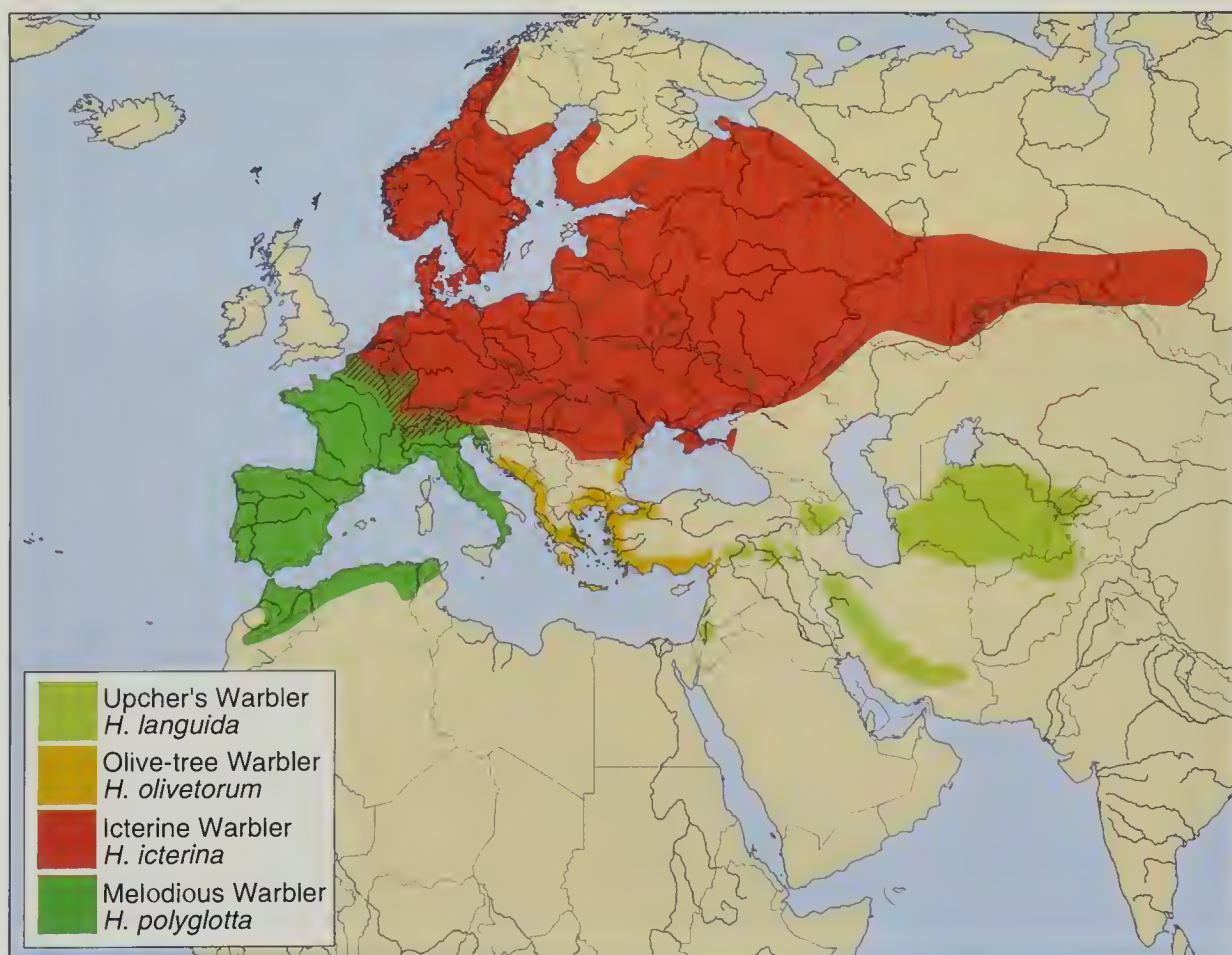


Fig. 12. Map showing breeding distribution of the 'icterine warbler' group: for details of species, see key (inset).

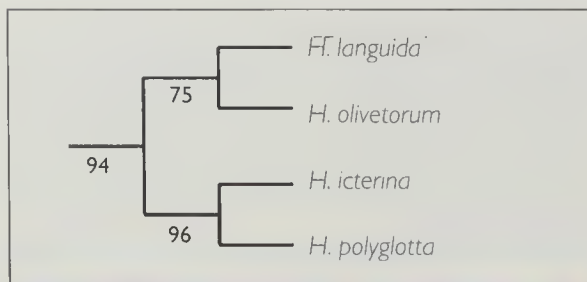


Fig. 13. Phylogenetic relationships of the 'icterine warbler' cluster (from Helbig & Seibold 1999). The figure is based upon Neighbour-Joining analysis; numbers refer to percentage statistical (bootstrap) support for branches (see text for details).

Baker 1997). Icterine and Melodious Warblers are the only *Hippolais* warblers with green and yellow plumage, and are an essentially parapatric, or marginally sympatric, pair, meeting and occasionally hybridising in Western Europe. Roselaar (in Cramp 1992) discusses intra- and inter-specific interactions between Icterine and Melodious Warblers. Their songs are different in composition and structure but, when played to a territorial male (of either species), elicit aggressive behaviour to an equal extent, even in areas from which one species was absent and the song was therefore unlikely to be heard (Secondi *et al.* 2003). This indicates that they are sufficiently closely related to recognise each other as potential competitors. An ongoing study using morphology, molecular markers and acoustics (Faivre *et al.* 1999; Secondi *et al.* 2003, 2004) has revealed that female sterility occurs in the hybrid zone and,

in combination with song recognition, is likely to be an important barrier to gene flow.

Olive-tree and Upcher's Warblers also differ in morphology (Svensson 1992; Harris *et al.* 1996). We are not aware of any behavioural or acoustic observations made in the Middle East, where Olive-tree Warbler occurs on migration within the breeding grounds of Upcher's Warbler. Here, it would be interesting to perform song recognition experiments on these two taxa, although their songs sound very different to the human ear. They are the largest *Hippolais* warblers, with a greyish plumage and restricted, disjunct distributions, and have long been treated as separate species. The genetic divergence between them is larger than that between Icterine and Melodious Warblers. They are also placed as a sister group in the molecular analysis (Helbig & Seibold 1999), albeit less strongly supported.

Recommendations

Icterine Warbler *H. icterina* and Melodious Warbler *H. polyglotta* are marginally sympatric (fig. 12), forming a moving hybrid zone (Secondi *et al.* 2003, 2004), diagnosable on morphology and DNA sequences and fulfil the criteria of Helbig *et al.* (2002) for separate species. Upcher's Warbler *H. languida* and Olive-tree Warbler *H. olivetorum* are allopatric, and again, being diagnosable on morphology and DNA sequences, fulfil the criteria of Helbig *et al.* (2002) to be treated as separate species.



175. Booted Warbler *Hippolais caligata*, Kyzylkol, southern Kazakhstan, May 2000.



Lars Svensson

176. Sykes's Warbler *Hippolais rama*, Sorbulak, southern Kazakhstan, May 1998.

Generic placement of the *pallida*/*caligata* complex

DNA sequence data suggest that radiation among species traditionally included in the genera *Acrocephalus* and *Hippolais* has been rapid. They form an unresolved branching pattern which also includes Lesser Swamp Warbler (Helbig & Seibold 1999) and a species-rich Pacific island group of taxa that have not been included in any molecular study to date. A case could be made to transfer all *Hippolais* warblers to the genus *Acrocephalus*, but there seems to be little other data to justify such a change at present. Icterine, Melodious, Upcher's and Olive-tree Warblers form a single clade, separate from the main group, and some observers have noted the close similarity of the 'olivaceous warbler' group to some species of *Acrocephalus* in the field (e.g. Bradshaw 2000). Furthermore, a case has been made (on morphological grounds) for the inclusion of the olivaceous warbler group within *Acrocephalus*, leaving the other four species in *Hippolais* (Sangster *et al.* 1999). The molecular data, however, do not support this; the low statistical (bootstrap) values indicate that these basal relationships cannot be resolved with sequences so far available (Helbig & Seibold 1999).

The need for further research

A full list of our recommendations is given in Appendix 1. It is clear that the present report is far from the last word on the taxonomic affilia-

tions of these warblers. Much more research is needed on the molecular genetics of the 'reed warbler' complex (comprising *scirpaceus*, *fuscus* and *avicenniae* of the Palearctic, along with *baeticatus*, *cinnamomeus* and three other sub-Saharan races) using larger samples of individuals from known locations across the breeding range in Africa and Eurasia. Similar data are needed to resolve relationships among the plethora of 'large' reed warblers across Southeast Asia and into Australasia. Further research is needed into the taxa currently treated as subspecies of Eastern Olivaceous Warbler; molecular data have not yet been published for *pallida*, *reiseri* or *laeneni*, and their phylogenetic affinities with *elaieica* remain uncertain (Ottosson, Bensch, Svensson & Waldenström unpublished data). We understand, however, that *elaieica* appears to be slightly different from the African subspecies (having exclusive haplotypes) but that there is no differentiation among *pallida*, *reiseri* and *laeneni*. This supports treating Eastern Olivaceous Warbler *H. pallida* as a single polytypic species, separate and distinct from the monotypic Western Olivaceous Warbler *H. opaca*. Additional ecological, behavioural and vocal data would be especially valuable from the area of possible sympatry between Western Olivaceous Warbler and Eastern Olivaceous Warbler of the form *reiseri* in North Africa. And, finally, it would be fascinating to know more about Large-billed Reed Warbler.

Acknowledgments

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Appendix 1. A summary of recommendations relating to the taxa of the genera *Acrocephalus* and *Hippolais*.

1. Aquatic Warbler *A. paludicola* is treated as a monotypic species.
2. Sedge Warbler *A. schoenobaenus* is treated as a monotypic species.
3. Black-browed Reed Warbler *A. bistrigiceps* is treated as a monotypic species.
4. Moustached Warbler *A. melanopogon* is treated as a polytypic species with three subspecies, *melanopogon*, *minica* and *albiventris*.
5. Eurasian Reed Warbler *A. scirpaceus* is treated as a single polytypic species, encompassing three subspecies in the Western Palearctic – *scirpaceus*, *fuscus* and *avicenniae* (which is restricted to the southern Red Sea) – together with the extralimital *baeticus* and other taxa in the Afrotropical region.
6. Marsh Warbler *A. palustris* is treated as a monotypic species.
7. Blyth's Reed Warbler *A. dunnetorum* is treated as a monotypic species.
8. Large-billed Reed Warbler *A. orinus* is treated as a monotypic species.
9. Manchurian Reed Warbler *A. tangorum* is treated as a monotypic species.
10. Paddyfield Warbler *A. agricola* is treated as a monotypic species.
11. Blunt-winged Warbler *A. concinens* is treated as a polytypic species with three subspecies, *concinens*, *stevensi* and *haringtoni*.
12. Great Reed Warbler *A. arundinaceus* is treated as a polytypic species with two subspecies, *arundinaceus* and *zarudnyi*.
13. Oriental Reed Warbler *A. orientalis* is treated as a monotypic species.
14. Clamorous Reed Warbler *Acrocephalus stentorens* is treated as a single polytypic species with three subspecies in the Palearctic, *stentorens*, *levantina* and *brunnescens*.
15. Basra Reed Warbler *A. griseldis* is treated as a monotypic species.
16. Thick-billed Warbler *A. aedon* is treated as a monotypic species.
17. Cape Verde Warbler *Acrocephalus brevipeunis* is treated as a monotypic species. It appears to be quite distinct from other Palearctic *Acrocephalus*, and may be conspecific with Greater Swamp Warbler *A. rufescens*. It forms a clade with the latter, along with Lesser Swamp Warbler *A. gracilirostris*, Madagascan Swamp Warbler *A. newtoni*, Seychelles Brush Warbler *A. sechellensis* and Rodrigues Brush Warbler *A. rodericanus*. The inter-relationships of these African forms need further study.
18. Icterine Warbler *H. icterina* is treated as monotypic species.
19. Melodious Warbler *H. polyglotta* is treated as monotypic species.
20. Upcher's Warbler *H. languida* is treated as monotypic species.
21. Olive-tree Warbler *H. olivetorum* is treated as monotypic species.
22. Eastern Olivaceous Warbler *H. pallida* is treated as a polytypic species with four subspecies, all of which occur in the Western Palearctic, *pallida*, *elaeica*, *reiseri* and *laeneni*; further research on this group is required.
23. Western Olivaceous Warbler *H. opaca* is treated as a monotypic species.
24. Booted Warbler *H. caligata* is treated as a monotypic species.
25. Sykes's Warbler *H. rama* is treated as a monotypic species.

Editorial note The maps in this paper (figs 3, 4, 7, 8, 10 & 12) are intended to show the approximate breeding ranges of the taxa involved, in relation to closely related members of the same group, to help readers comprehend broad-scale patterns more easily. For those wishing to examine fine-scale distribution patterns, we recommend cross-checking with the maps published in *BWP Concise*.

Conservation research news

Compiled by David Gibbons, Ken Smith and Mark O'Brien



Great Tits sing at a higher pitch in noisy urban areas

It has been known for many years that the songs and calls of some bird species differ among habitat types. In a classic study in the 1970s, Mac Hunter and John Krebs recorded songs of the Great Tit *Parus major* throughout its geographical range, in both open woodland and dense forest. They showed that birds which lived in open woodland had songs with a higher frequency than those living in dense forests. Remarkably, songs of Great Tits in open woodland in southern England were more similar to those of birds in open woodland in Iran, 5,000 km distant, than those in dense forest in southern England only 100 km away. It is thought that high-frequency songs might travel less effectively, and be degraded more quickly, in dense forests, in which there are lots of leaves and branches to deflect the song.

Until recently, such studies have looked only at song and call variation across natural habitats. As human populations continue to grow, however, the spread of urban environments is inevitable, along with a concomitant loss of natural habitats and growing levels of background noise. Consequently, many species of wildlife are trying to carve out an existence in noisy urban habitats. In a recent paper, two Dutch ornithologists, Hans Slabbekoorn and Margriet Peet, investigated the impact of such

anthropogenic noise on Great Tit song. The authors recorded songs of more than 30 male Great Tits, as well as the background noise in their territories, in the city of Leiden. They showed that most of the background noise was composed of low-frequency sounds and, more importantly, that birds in the noisiest territories sang at a higher pitch than those in quieter territories, presumably because higher-frequency songs were easier for conspecifics to hear in noisy areas.

The authors suggested two possible mechanisms for their results. Either (1) that males which already had higher-pitched songs selected noisier territories that best suited them ('territory adjusted to song'), or (2) that individual birds altered their song frequency depending on the noise levels within their territory ('song adjusted to territory'). Although they did not provide proof, the authors favoured the second explanation, that tits adjusted their song to their territory, as there is ample evidence of Great Tits learning and adjusting their songs during interactions with neighbours.

Hunter, H. L., & Krebs, J. R. 1979. Geographical variation in the song of the Great Tit (*Parus major*) in relation to ecological factors. *J. Anim. Ecol.* 48: 759-785.

Slabbekoorn, H., & Peet, M. 2003. Birds sing at a higher pitch in urban noise. *Nature* 424: 267.

Red-backed Shrikes avoid nest predators

The relationship between nesting success and predation is a highly complex one, although it is not always recognised as such. Prey species often develop strategies for minimizing the impact of predators, while, in turn, the predators themselves need to counter these strategies. In a study of breeding Red-backed Shrikes

Lanius collurio in southern Sweden, Staffan Roos and Tomas Part have shed some light upon one aspect of these complex interactions, the influence of predator (in this case Magpie *Pica pica* and Hooded Crow *Corvus cornix*) distribution on patch usage by one of their prey species.

Red-backed Shrikes arrive in southern Sweden in spring and choose their nesting sites from the available areas of scrubby grassland. By this time, the resident corvids are already settled and nesting. Roos & Part showed that the frequency of occupation of individual habitat patches by the shrikes depended on habitat quality (based on scrub cover) but also the distance from Magpie nests. Those patches close to Magpie nests were less likely to be occupied. Using both artificial and real shrike nests, they were also able to show that the daily survival of shrike nests was related to the proximity to corvid nests. Not all habitat patches were occupied by shrikes in any one year, and there

was considerable interchange between years. Interestingly, Roos & Part found that the chances of a patch being abandoned or reoccupied depended on the distance to any corvid nest, and changes in that distance between years. The shrikes appeared to be choosing to nest in the best habitat but were also avoiding the corvids.

Effective conservation requires that we understand the influence of such complex interactions on habitat selection and hence landscape management for birds.

Roos, S., & Part, T. 2004. Nest predators affect spatial dynamics of breeding Red-backed Shrikes (*Lanius collurio*). *J. Anim. Ecol.* 73: 117-127.

Identification of nest predators

Many studies of ground-nesting birds suggest that changes in nesting success may be a key factor in explaining population trends. Correctly identifying predators of bird nests is, however, often difficult. Direct observations are either excessively time consuming or involve expensive technology, since large sample sizes are needed for results to be useful, while indirect observations using artificial nests or evidence from depredated nests tend to be biased. A recent paper by Michael Anthony and colleagues in Alaska combined both direct and indirect approaches in order to estimate what proportion of nests was likely to be lost to different predators, and the extent to which estimates might be biased.

The basis of their approach was to quantify evidence of predation at a nest. Information was collected on 42 separate variables at all depredated nests. Most of these variables would be familiar to anyone who has spent any time monitoring ground-nesting birds, and include features such as whether an adult was killed, the presence of and size of egg shell fragments around the nest, and the extent and nature of damage to the nest itself. Direct observations, using both cameras and artificial eggs, were also undertaken at a sample of nests so that the evidence accumulated could be attributed to a given predator. Finally, observations of captive animals handling and consuming eggs were also used.

These methods were used to identify predators of nests of the dusky Canada Goose *Branta*

canadensis occidentalis, a subspecies which has declined substantially, from 28,000 pairs in 1960 to about 11,000 pairs in 1997. This decline can be attributed in part to habitat change as a result of an earthquake raising the ground level by 1.8-3.4 m and an associated invasion of shrubs and trees to areas where the geese nest. At the same time, there has been an increase in the number and diversity of nest predators in the region. In the four years of the study, 1,852 goose nests were found, of which 1,005 were destroyed by predators. Conclusive identification of nest predators was limited to 110 nests, 86 (78%) of which were known to have been destroyed by Bald Eagles *Haliaeetus leucocephalus* and 24 (22%) by Brown Bears *Ursus arctos*. The evidence obtained at the remaining 895 depredated nests suggested that 72% of destroyed nests were predated by eagles and 13% by bears. Of more relevance from a UK perspective, the study also established that other predators could also be identified with confidence; these included Mink *Mustella vison*, Red Fox *Vulpes vulpes* and other avian predators such as gulls *Larus*, skuas *Stercorarius* and Common Ravens *Corvus corax*. The approach outlined in this paper indicates a way in which a combination of methods, each individually restricted or biased, could be used to develop predator profiles and so identify the proportion of nests lost to different sources of predation.

Anthony, R. M., Grand, J. B., Fondell, T. F., & Manly, B. F. J. 2004. A quantitative approach to identifying predators from nest remains. *J. Field Ornithol.* 75: 40-48.

Letters

Taxonomic lists

Having watched birds in Britain and abroad since 1945, I have worked my way through a number of taxonomic lists, including Hartert, Witherby, Wetmore, Voous and Sibley & Monroe, and it appears that I have survived them all. Now I learn that I am going to have to hover between another new order, in the *BB* list, and *The 'Howard and Moore' Complete Checklist of the Birds of the World*. I have not yet seen the new Howard & Moore, and at £60.00 a copy may never do so, but doubtless it will take some getting used to after 40 years of Wetmore and Voous.

Consider that Tim Inskipp unilaterally forced Sibley & Monroe upon those who bird in the Oriental region, claiming that it was an improvement on Wetmore, being based on a rel-

atively objective method of assessment. Be that as it may, I cannot bring myself to have much respect for a sequence which, among other rearrangements, places the Procellariidae (petrels, albatrosses and storm-petrels) immediately before the Pittidae (pittas). A more unlikely juxtaposition would be hard to visualise.

What is the point of all these changes (other than to detail) every decade or so? It makes no difference to the birds; it confuses those of us who have got used to one sequence; and it must be infuriating to those writing and publishing bird books, all of which are now technically out of date. If taxonomists must impose their reworkings upon us, could they not do it less frequently and, even then, give us five or ten years warning before the upheaval?

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EDITORIAL COMMENT Martin Collinson has commented as follows: 'The recent changes to the order of the *British Birds* list follow those adopted by BOURC on the recommendation of its Taxonomic Sub-committee (TSC). Avian classifications are, and always have been, at least in modern times, intended to reflect ideas about the relationships between the birds in the list. If one were to draw an evolutionary tree of birds, those families that branch off earliest (i.e. are the most ancient) should be listed first. To do otherwise, e.g. to adopt a system that listed birds alphabetically, or perhaps in order of size, would deprive ornithologists and birders of any context within which to make valid comparisons among species (or higher groups) of bird that are closely or distantly related. People who study birds would lose one of the principal frameworks within which we understand bird biology, which could lead to mistakes in important scientific or conservation work, the consequences of which might ultimately harm the birds themselves. Indeed, in the absence of a phylogenetic basis for bird lists, there may be no other acceptable scientific criteria by which to decide if any particular list was 'the best'. Previously, the British List was based entirely on the 'Voous Order', outlined in *List of Recent Holarctic Bird Species* (Voous, 1977). The fact that this order was widely accepted suggests that birders and ornithologists really do want a bird list that reflects the evolutionary relationships between birds. The stability that the Voous Order engendered, however, happened in spite of long-term and ongoing taxonomic research, which demonstrated that some of the assumptions on which the Voous list were based were likely to have been wrong.

A number of phylogenetic studies, many using DNA analysis, have been published in recent years, which together formed a large body of evidence showing that the order of birds in the British List did not properly reflect their evolution. The TSC reviewed these papers and accepted that the most likely hypotheses for bird evolution had the following key characters:

- That the deepest branch-point in the evolutionary tree of birds splits them into the Palaeognathae (tinamous and 'ratites') and the Neognathae (all other birds).
- That within the Neognathae, the deepest branch-point splits them into Galloanserae (see below) and Neoaves (all remaining birds).
- The Galloanserae are composed of two 'sister' groups – Anseriformes (waterfowl) and Galliformes (turkeys, guineafowl, megapodes, grouse, pheasants, etc.).

'The *British Birds* Western Palearctic list (and indeed any world list) would therefore start with

Palaeognathae, as now. Since only Neognathae occur in Britain, the British List should start with the Galloanserae, as the deepest split from all other birds (Neoaves). Within the Galloanserae there are fewer species of Anseriformes than Galliformes, and therefore Anseriformes are listed first in accordance with normal custom. The sequence of families within these groups remains unchanged, so the British List now starts with Anatidae (swans, ducks, geese), followed by Tetraonidae and Phasianidae (grouse, pheasants, quail and partridges), followed by all remaining families, as in the old order (divers *Gavia*, grebes *Podilymbus*/*Tachybaptus*/*Podiceps*, etc.).

'In fact, with 50-100 new phylogenetic studies of birds currently being published each year, many of them producing new molecular insights into avian relationships, no-one would agree that the current order of the Western Palearctic list will ultimately be shown to be correct; there are many more changes that could be proposed. Taxonomists would argue that taxonomy is a science and that they are primarily concerned with trying to get things right, rather than considering the needs of publishers, recorders and birders. Nevertheless, if instability *per se* has an adverse effect on ornithology (and, personally, I am not convinced that it does), then there is an argument that large-scale changes to national and regional lists, if and when they are proposed, would have to be carefully managed by the appropriate Records Committees. It should perhaps also be noted that arguments for stability were debated fully a decade ago following the publication of the Sibley & Monroe sequence. In spite of heavyweight support, most notably by Mayr & Bock ('Provisional classifications versus standard avian sequences: heuristics and communication in ornithology', *Ibis* 136: 12-18), the arguments for stability over accuracy failed to carry the day, and these arguments are certainly no stronger now than they were then.'

Pygmy Cormorants in Europe

John Stewart's excellent paper on the recent fossil record (*Brit. Birds* 97: 33-43) includes the intriguing record of a possible Pygmy Cormorant *Phalacrocorax pygmeus* in Oxfordshire some 500 years ago. He does state, however, that the 'Pygmy Cormorant breeds no further west than Albania and Macedonia'. John has clearly overlooked the fact that the Pygmy Cormorant colonised northern Italy in the 1980s, with some 3-7 pairs nesting in the Po Delta by the mid 1990s and a current population of some

100+ nesting pairs. The birds are favouring willow *Salix* trees in the reserve of Punte Alberete and Valle Mandriole in the southern Po Delta. This steady increase in the only nesting colony in western Europe is no doubt part of the reason for the increasing number of vagrants starting to appear even farther west (e.g. The Netherlands), and we can only hope that Britain's first record for some 500 years is now on the doorstep.

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The occurrence of Radde's and Dusky Warblers in Britain

I have followed the 'friendly rivalry' between the tallies of Radde's *Phylloscopus schwarzi* and Dusky Warblers *P. fuscatus* in Britain for 20 years now; just as one seemed to 'pull away', so the other seemed to have a run of good years. That their overall totals still stand as close as 240 and 249 respectively (Rogers *et al.* 2003) is remarkable. Rogers *et al.* (2003) comment that there is poor correlation between the appearance of the two species in Britain, citing an alleged non-coincidence of 'bumper' (10+

records) years. This set me thinking.

In a strict statistical sense, records of the two species *are* significantly correlated ($P < 0.01$, Spearman's Rank correlation coefficient of 0.778), not only over the past 20 years, but over the entire period of the BBRC's existence (see fig. 1). Of course, the main reason for this is that records of *both* species have increased over these 45 years, probably mostly as a result of better observer coverage.

The issue of coincidental influx years is also

far from clear-cut. If 10+ Dusky Warblers occurred in ten of the last 20 years, and 10+ Radde's in seven, we would expect (statistically) 3.5 coincidental years owing to chance alone; in fact, we observe 5. And again, the fact that five of the seven years with the largest totals of Radde's Warblers since 1983 have also been

bumper Dusky years is surely evidence *for* some kind of non-stochastic pattern, not against!

Reference

Rogers, M. J., & the Rarities Committee. 2003. Report on rare birds in Great Britain in 2002. *Brit. Birds* 96: 542-609.

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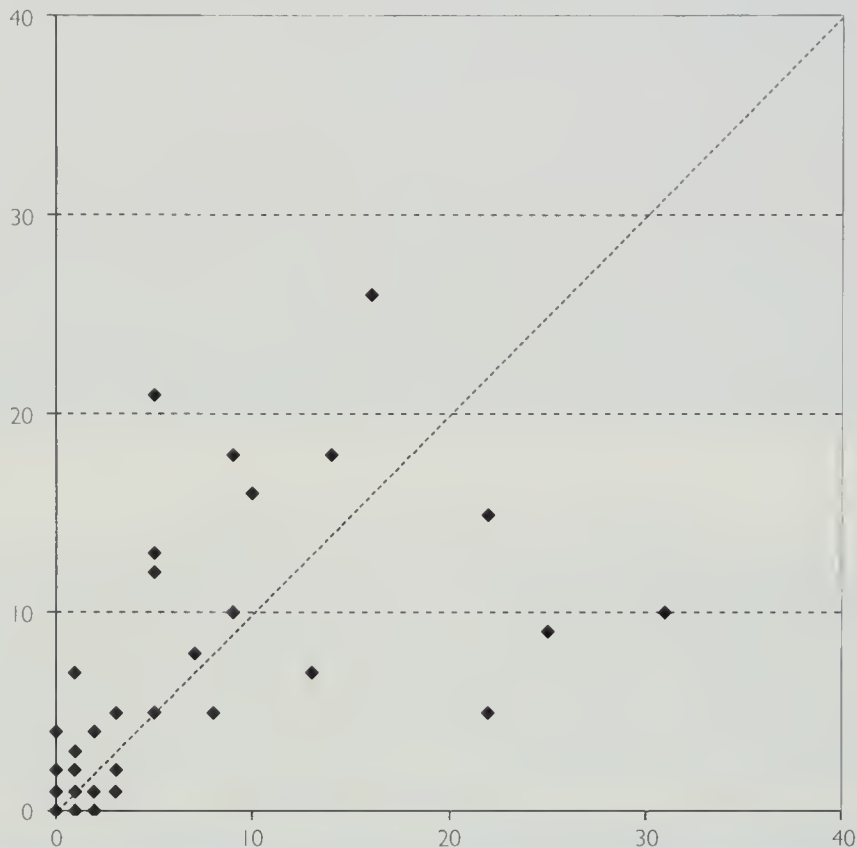


Fig. 1. The number of accepted records of Radde's *Phylloscopus schwarzi* and Dusky Warblers *P. fuscatus* in Britain, 1958-2002 (Radde's on horizontal axis, Dusky on vertical axis).

EDITORIAL COMMENT BBRC member Jimmy Steele has commented as follows: 'This is an interesting analysis. What the statistics tell you depends on your starting hypothesis. If that is a conventional null-hypothesis approach, as it is in this analysis, the starting position is that the two species occur randomly and their occurrence is completely unrelated. The above analysis comprehensively disproves this – there is clearly a significant correlation. The comment in the report, however, came from the *opposite* standpoint. The two species have very similar ranges, migration routes and habitats, and they tend to occur at a similar time in late autumn (though Dusky peaks a little later than Radde's). Starting from *this* position, one might expect a very high level of correlation between the two. While there is a significant statistical correlation, it is not necessarily strong (there are years when records of one are much more prevalent than the other). The correlation co-efficient would be fairly low – in other words you could not accurately predict the number of records of Dusky Warblers in one year by looking at the number of records of Radde's in the same year.

'The statistical approach used here could be applied to many species combinations though, particularly for scarce migrants and the more frequent rarities, with interesting results. It may actually tell us quite a lot about the mechanisms of vagrancy and even the origins of our birds. There is a whole dataset waiting to be analysed if anyone has the inclination. I wonder what the best predictor species for Black-throated Accentor *Prunella atrogularis* are!'

Reviews

THE WHOOPER SWAN

By Mark Brazil. T & A D Poyser, A&C Black, London, 2003. 512 pages; 14 colour photographs; numerous black-and-white photographs, line-drawings and distribution maps. ISBN 0-7136-570-X. Hardback, £45.00.

For a single-species monograph, this is a hefty tome and perhaps it hardly needs saying that the author is a Whooper Swan *Cygnus cygnus* enthusiast bar none. Mark Brazil became interested in the Whooper Swan while at university in the late 1970s, completing a PhD on the species' behavioural ecology. His interest has been maintained ever since, including throughout many years living in Japan.

The book is laid out in a conventional manner, dealing successively with, among other subjects, classification, the range, habitat and numbers of the European and Asian populations, food and feeding, behaviour, breeding, migration, population dynamics, and conservation. Maps, tables and histograms are used to display information, as are numerous photographs. In addition, there are many delightful line-drawings by Dafila Scott, often illustrating points for which there was presumably no satisfactory photograph.

I have, as a good reviewer should, read the book right through, gaining a great deal of information on the way, and I congratulate the author for bringing together such a wealth of material, perhaps especially from the

Russian and Asian literature so often neglected by European biologists. Certainly, I have learnt much about the species in the Far East which had previously passed me by. The author also deals very fully with the important studies which have been carried out in recent years in Iceland, both on breeding ecology and on the migration to and from Britain and Ireland, aided by the use of satellite transmitters.

That said, there were occasions when I actually found myself wishing that the author had included less detail and summarised more. For example, the section on Population, in the chapter 'Range, habitat and population in Europe', goes through each of some 22 countries in turn, presenting a (Mercator-projection) map of the whole of Eurasia on which the country is highlighted, followed by detailed text, often on a year-by-year descriptive basis. I was somewhat surprised to see that, after the situation in the UK had been dealt with in considerable, even exhaustive, detail, there followed a map highlighting Wales with a paragraph relating that the species occurs there only in small numbers.

If 'exhaustive' seems an unkind adjective to use, I found the subsection on the UK's breeding population, which consists of a mere handful of wild breeding pairs supplemented by the occasional pair of escapes from captivity, a typical example of an over-detailed approach. The whole status of the Whooper Swan as a UK breeding species can be, and indeed is, sum-

marised in a table. What seems overdone to me is that the information for each year from 1990 to 1998 is described in separate paragraphs, including comments on individual pairs and locations. Similarly, dealing with the wintering population in the UK, the author has included what can only be described as 'annual bird report' detail, e.g. 'The first Whoopers of the 1993-1994 winter arrived at WWT Caerlaverock on 28th September. A mere ten had gathered by 7th October, but a large influx followed, with 71 on 14th October and at least 129 on 24th October', and so on for another six lines. And this was just one of three WWT centres in one of several winters each so described.

The above paragraph may seem like nit-picking, but I have picked out only a couple of what could have been very many examples of excessive detail and inadequate summarising. I am of the firm opinion that this is a very good monograph of a bird I have always enjoyed counting, catching and ringing, or simply watching on an autumn day as they fly down the sea loch past my house on their way to Ireland. The author has done the species proud and no-one who wants to know all there is to know about the Whooper Swan can afford to be without this book; and they will enjoy reading it, as I have done. They may, though, find it less easy to use subsequently as a reference work. For that, it probably needed to be at least one-third shorter.

Malcolm Ogilvie

BIRDS OF NORTHERN INDIA

By R. Grimmett and T. Inskipp. Christopher Helm, A&C Black, London, 2003. 304 pages; 119 colour plates. ISBN 0-7136-5167-9. Paperback, £19.99.

What better way to road-test the latest offering from Tim Inskipp and Richard Grimmett than on a recent 19-day tour to northern India? For those people who own the original *Pocket Guide to the Birds of the Indian Subcontinent* by the same authors, together with Carol Inskipp, this book will seem

familiar as the layout is near-identical. The decrease in the area covered means that this book is slightly lighter (but only slightly), and it covers 812 species in field-guide-style detail with comments on a further 94 which are vagrants to the region. The geographical area covered includes the states of

Jammu and Kashmir, Himachal Pradesh, Uttaranchal, Uttar Pradesh, Madhya Pradesh, Haryana, Punjab, Rajasthan and Gujarat, and the Union Territory of Delhi. The authors state that the region of northeast India is not included as it would have substantially increased the book's size. With a forthcoming book on southern India in the pipeline, however, it seems a shame not to have included those extra species here.

The opening 45 pages contain the usual foreword, introduction, map of the area covered, references and glossary, as well as some interesting sections on important bird species, birdwatching areas, main habitats and family summaries. The text is based on the widely acclaimed *Birds of the Indian Subcontinent* (by Grimmett, Inskipp & Inskipp) and covers salient identification features, a rather confusing key as to the status of each species in each state (instead of any maps),

and some notes on vocalisations for some species. For some of the more difficult identification challenges, there are useful tables at the back of the book. These tables invariably hold more information than the species texts, and it is a shame that they could not have been incorporated into the species accounts – this would have been especially useful in the field, for example when searching desperately for transcriptions of the calls of *Phylloscopus* warblers.

The taxonomy largely follows that of *An Annotated Checklist of the Birds of the Oriental Region* although some species have been shuffled around for ease of comparison. The latest taxonomic decisions have been well illustrated and documented, and include Indian Gyps *indicus* and Slender-billed Vultures *G. tenuirostris* and the *Seicercus* warblers, two species of which occur in the region – Golden-spectacled *S. burkii* and Whistler's *S. whistleri*.

The plates are from the original pocket guide although they are now on white backgrounds and, with the reduction of species included, are understandably less cluttered. All are of a very high standard and I especially liked the raptors by Alan Harris and Tim Norfolk, as well as Martin Elliot's gulls (*Laridae*) and the green pigeons *Treron* by John Cox.

If there were any slight complaints with this book it would be the amount of unused space in many of the species accounts; surely this could have been used to provide a little more identification or vocalisation information? With only 70 pages fewer than the original pocket guide, it maybe wise to stick with the original book unless you are planning to go to the north of India only. If it is only the North you are interested in, then this book comes highly recommended.

James Lidster

THE BIRDS OF HISPANIOLA:
HAITI AND THE DOMINICAN REPUBLIC

By Allan R. Keith, James W. Wiley, Steven C. Latta and José A. Ottenwalder. 2003. BOU Checklist No. 21, British Ornithologists' Union & British Ornithologists' Club, Tring, 2003. 309 pages; 32 pages of colour photographs; tables and figures. ISBN 0-907446-26-4. Hardback, £30.00.

This is the 21st checklist in the now famous BOU and BOC series of checklists of particular countries or islands, and the authors give an excellent and well-written account of the avifauna of the second-largest island of the West Indies. This is the first treatment of the birds of Hispaniola since *The Birds of Haiti and the Dominican Republic*, by Wetmore & Swales in 1931. The island of Hispaniola consists of Haiti, one of the poorest countries on earth, which has been in the news recently following the ousting of its president, and the larger and economically better-off Dominican Republic. The four authors have a wealth of experience and include Allan Keith, who

has also produced the BOU Checklist *The Birds of St Lucia* (1997) and who co-authored the acclaimed *Field Guide to the Birds of the West Indies* (1998).

The book follows the well-established format of the series, with introductory chapters titled General History and Economy, Ornithological History, Geology and Geography, Climate and Weather, Vegetation and Forest History, Migration, Breeding, Zoogeography, Conservation and a welcome rundown of other taxa, including mammals, amphibians, reptiles, freshwater fish, butterflies, marine biodiversity and land snails. In particular, the discussion on the zoogeography of the island is illuminating and should be read

by everyone interested in the ornithology of the West Indies. Then follows the main Systematic List, with scientific and English names, subspecies, distribution in North America and within the West Indies, and a detailed description of status (past and present) and abundance of each species on Hispaniola. Added to that we find information, if available, about breeding on the island, ringing recovery data, notes on the taxonomic treatment of species or subspecies, and a summary of the collections in which specimen material from Hispaniola is known to be housed. There is also a nice photographic section showing habitats and some great shots of the more important bird species. Appendices contain lists of species of uncertain occurrence and hybrids, major collecting expeditions on Hispaniola (1732–1988), living and extinct mammals, a list of the bird species of ten satellite islands or island groups, an extensive gazetteer and locations of specimen material

from Hispaniola. The 29 pages of references and the author's biographies conclude this well-researched book.

Hispaniola is best known ornithologically for its endemic bird family, the Dulidae (comprising a single species, Palmchat *Dulus dominicus*), and two members of a family which is endemic to the Caribbean, the Todidae. It hosts about 31 endemics, depending on your view of taxonomy, and the authors take a fairly conservative view concerning Grey-headed Quail-Dove *Geotrygon caniceps* (now usually split from the Cuban form), Greater Antillean Nightjar *Caprimulgus cubanensis* (widely

considered split from the Cuban form) and the enigmatic White-winged Crossbill *Loxia leucoptera* (in view of recent research into crossbill taxonomy, it is surely best to consider the Hispaniolan *L. l. megaplaga* as a separate species). It is pleasing to see that the two distinctive chat-tanagers *Calyptophilus* receive a lengthy treatment. Another species that should now be considered as endemic is the splendid Golden Swallow *Tachycineta euchrysea*, as there have been no recent records from the only other island on which it has occurred as a resident, neighbouring Jamaica. I particularly enjoyed the discussions on Black-capped Petrel *Pterodroma*

hasitata, on the rare and critically endangered Ridgway's Hawk *Buteo ridgwayi*, on the introduction of Olive-throated Parakeet *Aratinga nana* and its impact on the populations of Hispaniolan Parakeet *A. chloroptera* and on the ongoing research into finding the exact taxonomic position of Green-tailed *Microligea palustris* and White-winged Warblers *Xenoligea montana*.

This book will definitely accompany me on my yearly trip to the Dominican Republic and its marvellous avian treasures.

Mark Van Beirs

**BIRDS OF FRASER'S HILL:
AN ILLUSTRATED GUIDE
AND CHECKLIST**

By Morten Strange, Nature's
Niche Pte Ltd, Singapore, 2004.
120 pages; numerous colour
photographs; maps.
ISBN 981-04-9930-2.
Paperback, approx. £3.60.

Fraser's Hill, a former colonial hill station, and site of the annual Fraser's Hill Bird Race, forms an essential component of any birding itinerary to Malaysia. Lying in the hills to the northeast of Kuala Lumpur, at an elevation of 1,165 m, it offers a compact and readily accessible site where most of Malaysia's montane and sub-montane specialities occur. In this pocket-sized photo guide, Morten Strange has pulled together much of the essential information that

birders frequently seek when planning a trip. With its comprehensive collection of outstanding photographs, illustrating 95 of the most frequently encountered species at Fraser's Hill and The Gap, this guide serves as an identification and site guide, as well as providing useful addresses and contact details for those wanting to book accommodation.

Starting with a brief introduction which outlines the location, setting it within a local and regional context, there follows a summary of the better birding spots along with a map of the road and trail network. Although species accounts are concise – a brief description, plus a comment on status, habitat and behaviour – they are supported by the photographs, which provide the main focus of this book. This collection includes some of the best work of Asia's forest bird photographers;

the Blyth's Hawk Eagle *Spizaetus alboniger* is probably the best published photograph of this elusive forest raptor, while photographs of the Cutia *Cutia nipalensis* and Brown Bullfinch *Pyrrhula nipalensis* show that even the most secretive species eventually reveal themselves. A useful checklist, totalling 247 species, is followed by a hypothetical list comprising a further 61 species (including 37 which have been attracted to lights and trapped for ringing, but of which there are no field observations).

At just SG\$10.90 (plus p&p, currently available online at www.naturesniche.com), this guide represents excellent value for money and provides a useful taster for anyone making their first visit to Fraser's Hill.

Peter Kennerley

**DIE VOGELSTIMMEN EUROPAS, NORDAFRIKAS
UND VORDERASIENS
(THE BIRDSONGS OF EUROPE, NORTH AFRICA
AND THE NEAR EAST)**

Compiled by Andreas Schulze. Musikverlag Edition
Ample, Rosenheim, 2003. 17 CDs featuring 2,817
recordings of 819 species, and a 64-page booklet.
Total running time 19 hours and 20 minutes. £67.99.

There has long been a need for a complete set of sound recordings for the Western Palearctic, and now it has finally arrived. Utilising many of the recordings from the popular set of four CDs by Jean Claude Roché and more still from the later collections of ten CDs by Roche and Jérôme Chevereau, this is truly an impressive collection of recordings. As well as Andreas Schulze and Jean Claude Roché, several other top sound recordists have contributed, including Hans-Heiner Bergmann, Claude Chappuis,

Karl-Heinz Dingler, Guy Gibbon, Krister Mild, Pavel Pelz, Boris Veprintsev and Alfred Werle.

From what little I could decipher from the accompanying booklet in German, the total number of recordings offered is over 2,800 and includes over 800 species. Songs and some calls are given and this is obvious even to those with limited understanding of German (in my case limited = none!). All is not lost, however, as all tracks are numbered and scientific names are given; in addition, there is a list of English names on the internet at www.birdsongs.de/birdsongs.pdf.

The taxonomy followed is not clear, and some debatable splits – such as Green Woodpecker *Picus viridis* of the form *sharppei*, Northern Wheatear *Oenanthe oenanthe* of the form *seebolmi* and Dark-throated Thrush *Turdus ruficollis* of the form *ruficollis* – are included as full species. This does work in the compilation's favour, however, because at least we are thus aware of which race has been recorded; and the geographical isolation of the woodpecker and the wheatear gives a strong clue as to where they were recorded. The same cannot be said for many of the other recordings, where the listener is left to hazard a guess as to which race/form is involved. This is certainly the main downfall of the set as there is no mention in the accompanying booklet or on the internet as to where or when any of the recordings were made. Perhaps this is of little significance for some species but for potential future splits, and for species with identifi-

able forms such as Yellow Wagtail *Motacilla flava*, Subalpine Warbler *Sylvia cantillans*, Isabelline Shrike *Lanius isabellinus* and Azure-winged Magpie *Cyanopica cyaneus* it would have been a great help. As much detail as possible about the bird being recorded, in particular racial provenance, age and sex, would be a major asset to a work such as this.

Nonetheless, this collection is certainly comprehensive and includes nearly all the species of American wood warbler (Parulidae) on the Western Palearctic list as well as both Black-billed Cuckoo *Coccyzus erythrophthalmus* and Yellow-billed Cuckoos *C. americanus*, most Nearctic ducks, *Catharus* thrushes and the majority of the American waders which have occurred in Europe. From the East there are highly sought-after recordings of Little Curlew *Numenius minutus*, Pallas's Sandgrouse *Syrhaptes paradoxus*, Oriental Turtle Dove *Streptopelia orientalis*, Siberian Thrush *Zoothera sibirica*, Gray's Grasshopper Warbler *Locustella fasciolata* and Eastern Crowned Warbler *Phylloscopus coronatus* (though sadly only the song). More extralimital or rarely available recordings include Bar-headed Goose *Anser indicus*, Verreaux's Eagle *Aquila verreauxii*, Swinhoe's Snipe *Gallinago megala*, Crested Auklet *Aethia cristatella*, Brown Fish Owl *Ketupa zeylonensis* and Blue Grosbeak *Passerina caerulea* among too many more to list here.

Very few species which have occurred in the Western Palearctic are omitted, although it would have been more comprehensive

(and not too difficult) if calls for certain species – such as Blyth's Reed Warbler *Acrocephalus dumetorum*, the 'speeeoo' call of Blyth's Pipit *Anthus godlewskii*, the rattling call of Taiga Flycatcher *Ficedula albicilla* and the different calls of Sykes's Hippolais *raua* and Booted Warblers *H. caligata* (to name but a few) – were included. Of the species I know well, there do not appear to be too many mistakes, although a beautiful recording of a singing Radde's Warbler *Phylloscopus schwarzi* is followed by a calling bird which is definitely not this species and probably not even a *Phylloscopus*.

The recordings are generally of extremely high quality; listening to them all may have been time-consuming but their benefits as a reference and a learning aid cannot be overestimated. Bird vocalisations are a key factor in the identification of many species. In a field guide we are told what to look for and how to identify different species. With vocalisations we are often left to fathom out differences from reading transcriptions or listening to sound recordings for ourselves. My real plea would be for an English booklet with helpful, expert comments for each species and the aforementioned information on location and dates for recordings. This aside, Andreas Schulze should be commended for such an achievement and at less than £4.00 per CD this is superb value for money and a must for all birders in the Western Palearctic.

James Lidster

News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

Dibden Bay saved

In a landmark victory for conservation over big business, the UK Government has rejected plans for a new container port on the western side of Southampton Water, in Hampshire, because of the site's international importance for birds. The Solent and Southampton Water Special Protection Area supports up to 50,000 waders and wildfowl in winter, including dark-bellied Brent Geese *Branta bernicla bernicla*. Associated British Ports had proposed to build a six-berth deep-water quay, 1.85 km long, at Dibden Bay, covering some 240 ha of rough grazing known as the Dibden Reclaim, and swallowing some 76 ha of intertidal foreshore. The new port would have handled 1.5 million container loads of imported goods each year.

But, following a year-long public inquiry, the inquiry inspector recommended refusal of the plans and the Government agreed. Transport Minister Tony McNulty said: 'The Government fully recognises the nation's and industry's needs for additional container port capacity in order to meet future economic demand, but every proposed port development must be justified on its own merits. One important factor in the making of this decision was the environmental impact of the proposals on internationally protected sites.' English Nature was one of many opponents of the scheme, which would have impacted upon eight Sites of Special Scientific Interest (SSSI). Monitoring work on the reclaimed land behind the foreshore established that 2,500 Eurasian Wigeons *Anas penelope* graze the site each winter, while in summer the Reclaim, which has now been given SSSI status, supports 30 pairs of breeding Northern Lapwings *Vanellus*



Günter Bachmeier

177. Northern Lapwing *Vanellus vanellus*; one of several key species which will benefit from the decision not to create a massive new container port at Dibden Bay, Hampshire.

vanellus, making it one of the most important sites in southern England for this species.

Much of the data which helped secure the Dibden Bay victory came from Wetland Bird Survey (WeBS) work by Hampshire birders. Andy Musgrove, WeBS coordinator at the BTO, paid the following tribute: 'It is a testament to the dedication, skills and professionalism of the UK's volunteer network that this reliable and unbiased data can be used in such a decisive way to provide evidence upon which to base such major decisions, and the counters should be congratulated for their contin-

uing hard work.' And that hard work continues with two potentially damaging port proposals in Essex: at Shell Haven, on the north bank of the Thames estuary, and at Bathside Bay, Harwich, where Hutchinson Ports wants to build the second-largest container port in the UK. The public inquiry into the Bathside Bay plans is now underway...

Links:
Portswatch
(www.portswatch.org.uk);
English Nature
(www.english-nature.org.uk/news/enquiry/dibden_report.asp).

Syrian Bald Ibis update

Colin Richardson has provided N&c with an update on the tiny Bald Ibis *Geronticus eremita* colony rediscovered in Syria in 2002. 'The total population in Syria is currently two breeding pairs plus a single bird near Palmyra, in the eastern desert. I observed all the birds on 4th April with the help of local guides Mahmud and Adeeb (hellopalmyra@hotmail.com), working with Gianluca Serra (gianlu@scs-net.org) on the conservation of the ibis colony and the development of the nearby Talila nature reserve. I strongly recommend readers to contact them, to encourage and acknowledge local conservation efforts. This species is still declining drastically and previous broods are wintering in unknown locations, not likely to return to Syria, assuming that they survive, until ready to breed.'

Ebro Delta saved?

In the wake of the Socialists' surprise victory in the Spanish general election, most commentators focused on the new government's pledge to withdraw its troops from Iraq. But another manifesto pledge could be far more significant for the environment – the cancellation of the highly controversial National Hydrological Plan (NHP), a grandiose water transfer scheme that would have diverted 'excess' water from the River Ebro in northeast Spain to supply the intensive agriculture and tourist resorts in the south of the country. The Plan involved building 118 dams and more than 1,000 km of canals and pipelines. One of the most damaging dam-construction projects, La Brena II in the Sierra Morena, Andalucía, would have bisected the last viable population of the Critically Endangered Iberian Lynx *Lynx pardinus*, besides having a serious impact on breeding Black Storks *Ciconia nigra* and Eurasian Black Vultures *Aegypius monachus*.

Margot Wallström, European Environment Commissioner, had delayed any decision on funding (an estimated €18 billion) until there was evidence that it did not break EU environmental laws (*Brit. Birds* 97: 108). Now, though, the Spanish election result seems to have killed off the most damaging aspects of the NHP. A spokesman for the victorious Socialists said: 'The Ebro water transfer has passed away', while Carlos Ibanez, the SEO/BirdLife Spain representative in the Ebro Delta, said: 'I believe that the whole dam-building programme will be paralysed, and that 80-90% will never be built.'

Storks in Yorks

Following the recent trend for human-assisted reintroductions (Red Kites *Milvus milvus*, Ospreys *Pandion haliaetus*, Corn Crakes *Crex crex* and Great Bustards *Otis tarda*), a pair of White Storks *Ciconia ciconia* have decided to reintroduce themselves to the British avifauna. If successful, the pair which settled in West Yorkshire in April will be the first White Storks to breed in Britain since 1416. Both of the birds are ringed, and the BTO Ringing Office has tracked down their origins. The female, P6222, was originally found in poor condition in northern France (Calais) in September 2002 and taken into care. Five months later, its recovery complete, it was ringed and released near Lille. The male, M5638, was caught as a free-flying bird at an animal park at Mechelen, Belgium, in April 2002; it bore a blue 'chicken ring', so was assumed to be an escaped bird, origin unknown. Remarkably, this is not the first time it has wandered to Britain; it was seen at Alton Water, Suffolk, in April 2003 with an unringed bird. Clearly, although neither of these birds are part of an official reintroduction scheme, their histories are both somewhat chequered. Previous ringed White Storks in Britain & Ireland have come from Denmark, Germany, Belgium and The Netherlands.

RSPB choughed about Cornish hat-trick

Continuing the 'self-reintroduction' theme, England's only pair of wild Red-billed Choughs *Pyrrhocorax pyrrhocorax* are breeding in Cornwall for the third successive year. RSPB chough project officer Claire Mucklow was delighted with the news: 'This will be the third generation of Cornish choughs and, with any luck, there will be some females in this brood.' The RSPB runs a daily 'choughwatch' at the National Trust-managed Southerly Point on the Lizard peninsula so that visitors can watch the birds through telescopes. As living emblems of Cornwall, the choughs are doing their bit for the Cornish tourist trade.

The Red-billed Choughs on the Lizard raised three chicks in 2002 and a further three in 2003. One of last year's trio was thought to be a female, but has not been sighted over the winter. The remaining youngsters have found their own favourite coastal spots along the south and west coasts of the county.

Eric Hosking Trust

As reported in May's N&C (*Brit. Birds* 97: 254), The Eric Hosking Trust is seeking applications for its 2004 bursary to sponsor ornithological research through the media of writing, photography or illustration. Bursaries of up to £500 are awarded by the Trust, set up in the memory of the legendary bird photographer. The closing date for applications is 30th September 2004, and the address for applications, accidentally omitted last month, is: The Eric Hosking Trust, Pages Green House, Wetheringsett, Stowmarket, Suffolk IP14 5QA; tel. (01728) 861113; e-mail: david@hosking-tours.co.uk

Beak deformities in 'pristine' wilderness

A growing incidence of beak deformities among Alaska's birds is puzzling scientists in the northernmost state of the USA. Some 30 species of bird have been logged with curved beaks up to three times their usual size. In many cases, the beaks are so long that birds are unable to feed or preen effectively. Crows *Corvus* in southeast Alaska are the latest to fall victim, says Colleen Handel of the US Geological Survey's Alaska science centre in Anchorage, who has been tracking the outbreak across the state. The wide range of birds affected rules out the possibility of a species-specific cause, and the research team has so far found no evidence of any disease organism. The deformities may be due to organochloride pollutants in the region, an idea consistent with the geographic spread of the outbreak. Compounds such as polychlorinated biphenyls and dioxins – persistent pollutants pumped out by waste incinerators – could damage the birds' DNA.

Nesting season flooded out on Ouse Washes

April's floods on the Ouse Washes in Cambridgeshire will probably wipe out this year's nesting season for wading birds. Potentially, up to 1,000 pairs of waders may have been affected over the 2,400 ha of wet grassland, although the numbers of nests lost are not known precisely as the floods happened before spring bird surveys.

An increase in spring and summer flooding since the mid 1970s has led to frequent poor years for ground-nesting birds on this internationally important wildlife site. 2003 was an exception, however, and for Northern Lapwings *Vanellus vanellus* it was the best breeding season for two decades, with 327 pairs nesting on the Washes, while the total of 443 breeding pairs of Common Redshanks *Tringa totanus* was the highest ever recorded. But even in such a good year, only four nests of Black-tailed Godwit *Limosa limosa* were found along the 30-km length of the Ouse Washes in 2003. Floods have been the main cause for the collapse in the breeding population of godwits, which peaked at 65 pairs in 1972. On the Nene Washes near Peterborough, however, where there is no spring flooding, there are some 40 pairs of godwits this spring, up from 32 pairs in 2003, and representing 75% of the UK breeding population. A ringing programme has shown that the two populations are quite separate; when godwit nests are flooded out on the Ouse Washes, the birds try to nest on nearby arable fields, rather than moving to the Nene, usually without success.

Migrants appreciate sunsets

A study of migrant *Catharus* thrushes has established that they steer by compass while on migration – and that they calibrate their compasses at sunset before embarking on night flights. According to the study, published recently in the journal *Science* (*Science* 304: 373, April 2004), experiments were designed to mislead Swainson's *C. ustulatus* and Grey-cheeked Thrushes *C. minimus* by exposing them to magnetic fields distorted towards the east. The experiments seemed to work; released after dark, the birds flew west, rather than north to their summer breeding grounds. They were fitted with radio transmitters, and the researchers followed them by car for up to 1,100 km.

The following day, however, the birds realised the direction of twilight and corrected their flight northward. The conclusion is that the thrushes steered by their own migratory compass at night, which is calibrated by the setting sun every 24 hours. Previously, migration theorists have proposed that birds use mental maps, based on memorised landmarks, or navigate by sun or stars. But oceans have no landmarks, and the sun is no guide at night, while any birds using the stars would be confused going north to south, as fresh constellations appear. For a while, researchers decided that nature provided birds with their own 'compass' – tiny fragments of magnetite in the brain. They tested this by trapping migrants in a room with a false magnetic field. On release, these birds flew in the 'wrong' direction, whereas as the experimental controls, with no field distortion, flew in the expected direction.

That, however, did not answer all the questions. Magnetic north is around 1,000 km from the North Pole, and moves from year to year; even more confusing, there are cyclic fluctuations in the Earth's field. If magnetism was the only guide, any migrant leaving north Alaska and following magnetic south would, in fact, head west. The research team concluded that the *Catharus* thrushes in their study at least relied on a compass, but checked it at twilight each day.

Humber waders

In 2002, a group of bird ringers formed the Humber Wader Ringing Group (HWRG). Everyone who has visited Spurn Point in the autumn or winter will have seen the vast numbers of waders which can be found on the shores of the estuary, but how many have wondered where those birds come from, where they go to once they have left the Humber, and what part the Humber mud plays in their life cycle? Furthermore, what would happen to these birds if their existing habitats change in some way? The Humber drains one fifth of all the country's water and is one of the busiest commercial river systems in the UK, with large ports at Grimsby, Immingham and Hull, not to mention the traffic which uses the Trent river complex. The threat of development is ever present, and there is an urgent need to understand what effects this might have on the way birds use the Humber. To do that, it is necessary to be able to identify individual birds, so as well as using standard BTO metal rings on all the birds we catch, we are also using coloured plastic rings on two species – Bar-tailed Godwit *Limosa lapponica* and Common Redshank *Tringa totanus*. We are aware that areas favoured by Bar-tailed Godwits are already under threat of development. If you see one of 'our' colour-ringed birds, please report it to us, with details of species, date when and place where seen, and the combination of coloured rings which the bird is wearing on each leg. You can e-mail your sightings to us at humber-waders@tesco.net or via the BTO (ringing@bto.org) or by post to BTO, The Nunnery, Thetford, Norfolk IP24 2PU).

We also need more ringers and helpers; so even if you have little previous experience of wader ringing, or simply want to help out and find out more about what we do, we would be pleased to welcome you. Why not come along and give it a try?

(Contributed by John Wint, HWRG)



Monthly Marathon

Photo no. 206: Red-throated Pipit

Monthly Marathon photo number 206 (*Brit. Birds* 97: plate 78, repeated here as plate 178), which shows a streaky brown passerine, most of its head and face hidden, and facing away from us, appears to be a tricky problem at first sight. On closer inspection though, there are a number of features which can help us ascertain which family it belongs to. The combination of heavily streaked upperparts and rump, and the dark-centred tertials with even, pale brown fringing, points towards a member of the pipit family *Anthus*.

Thirteen species of pipit have been recorded in the Western Palearctic. The streaked rump will help eliminate the members of the Water *A. spinoletta*, Rock *A. petrosus* and Buff-bellied *A. rubescens* group, as well as ruling out Berthelot's *A. berthelotii*, Long-billed *A. similis*, Olive-backed *A. hodgsoni*, Tree *A. trivialis* and Meadow Pipit *A. pratensis*. The first three of these also show a much plainer mantle, as does Olive-backed. The three



Richard Chandler

178. Red-throated Pipit *Anthus cervinus*, Israel, March 1989.

'larger' pipits, Richard's *A. novae-seelandiae*, Blyth's *A. godlewskii* and Tawny *A. campestris* do show streaking on the mantle (Tawny only in juvenile plumage) but this is never as heavy as in our bird. The rump streaking on these last three species, although present, would also not be as prominent as the mystery bird shows.

So, quite rapidly, we are down to just two species, Pechora *A. gustavi* and Red-throated Pipit *A. cervinus*. Unfortunately, we can see

nothing of the bill or breast pattern, although the supercilium appears to be perhaps a little too prominent for Pechora. One feature which does help separate Red-throated from Pechora is the primary projection. On Pechora Pipit the tertials are shorter, leaving a visible primary projection, whereas the longer tertials of Red-throated cloak the primaries. Our bird appears to show a primary projection, especially on its right wing, so does this mean it's a Pechora? Judging features such as this can be very difficult from a photograph, especially with our bird adopting an awkward posture while preening. Another feature which both of these species can show is prominent mantle stripes or 'braces'. Those on Pechora Pipit are often more obvious and can appear surprisingly black and white in the field. Our bird does not appear to have such prominent mantle markings but again, with the bird preening, the mantle feathers are slightly out of alignment and perhaps masking any true pattern. Nevertheless, the lack of a heavily marked mantle, and avoidance of the potential pitfall of misjudging the primary projection on one freeze-framed photograph, should – hopefully – point us towards Red-throated Pipit.

James Lidster



179. 'Monthly Marathon'. Photo no. 209. Seventh stage in thirteenth 'Marathon'. Identify the species. Read the rules (see page 54), then send in your answer on a postcard to Monthly Marathon, c/o The Banks, Mountfield, Robertsbridge, East Sussex TN32 5JY, or by e-mail to editor@britishbirds.co.uk, to arrive by 31st July 2004.

Several readers commented that they found this a difficult problem and, for most, the confusion over whether or not that was a genuine primary projection seemed to be the key stumbling block! Nonetheless, a majority of entrants were not fooled, and 68% of entries were correct. Although some of the remainder were for Pechora Pipit,

there was a wide spread of alternatives, including several from other families, so this was by no means an easy round. We still have a leading group of six this month, with a sequence of four correct answers in this thirteenth 'Marathon'.

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Recent reports

Compiled by Barry Nightingale and Anthony McGeehan

This summary of unchecked reports covers mid April to mid May 2004.

Lesser Scaup *Aythya affinis* Water's Edge Country Park (Lincolnshire), 28th-30th April. **Bufflehead** *Bucephala albeola* Astley Moss (Greater Manchester), 11th April; presumed same, Pugney's Country Park (West Yorkshire), 12th-22nd April; North Uist (Western Isles), 10th May. **White-billed Diver** *Gavia adamsii* Lewis (Western Isles), up to five, 15th-25th April, two to 30th April with one remaining to 5th May; Newbiggin (Northumberland), 28th April.

Purple Heron *Ardea purpurea* Pegwell Bay (Kent), 22nd April; Grove Ferry (Kent), 26th April; Priorslee Lake (Shropshire), 27th April; Horsey (Norfolk), 1st May; Slimbridge, 2nd May, presumed same bird as at Aylburton Warth (both Gloucestershire), 6th May. **Glossy Ibis** *Plegadis falcinellus* Ringwood (Hampshire), 29th-30th April; Charlton (Wiltshire), 1st-2nd May; Cotswold Water Park (Gloucestershire), 2nd May; Otmoor (Oxfordshire), 2nd-10th May (all above sightings are presumed to relate to the same bird). Bowling Green Marsh (Devon), long-stayer to 29th April.

Black Kite *Milvus migrans* Marsh Lane (West Midlands), 16th April; Mull (Argyll), 20th April; Horsey, 6th May; Bath (Somerset), 7th May; Margate, 10th May, with presumed same over St Margaret's Bay (both Kent), 10th May. **White-tailed Eagle** *Haliaeetus albicilla* Aviemore (Highland), 10th April; Fair Isle (Shetland), 12th April; Findhorn Valley (Highland), 16th April; Durkadale (Orkney), 26th April. **Red-footed**

Falcon *Falco vespertinus* Grove Ferry, 24th April; Barton-on-Sea (Hampshire), 25th April; Nanjizal (Cornwall), two, 26th April; Waxham (Norfolk), 1st-11th May; Bacton (Norfolk), 2nd May; Cley (Norfolk), 2nd May; Burnham Overy Staithe (Norfolk), 2nd May; Long Cross (Wiltshire), 2nd May; South Uist (Western Isles), 9th May.

Kentish Plover *Charadrius alexandrinus* Pool of Virkie (Shetland), 24th-27th April; Upware Washes (Cambridgeshire), 1st May; Dunster (Somerset), 1st May; Berrow (Somerset), 2nd-3rd May; Northam Burrows (Devon), 4th-5th May. **American Golden Plover** *Pluvialis dominica* Gareg-Lwyd (Carmarthenshire), 3rd-4th May. **Long-billed Dowitcher** *Limnodromus scolopaceus* Bothal Pond (Northumberland), 6th-23rd April; Sandoyne, 27th April, same Ayre Loch (both Orkney), 30th April. **Upland Sandpiper** *Bartramia longicauda* Foula (Shetland), 4th-8th May. **Lesser Yellowlegs** *Tringa flavipes* Gann Estuary (Pembrokeshire), 11th April; Hayle Estuary (Cornwall), long-stayer to at least 3rd May.

Pomarine Skua *Stercorarius pomarinus* Heavy passage occurred in the first week of May, including 2,019 past Lewis in six hours on 7th May. **Bonaparte's Gull** *Larus philadelphia* Marazion (Cornwall), 9th April; Llanrhystud (Ceredigion), 10th-14th April and 7th May; Cardiff (Glamorgan), 21st-24th April; Dunganarvan (Co. Waterford), 24th April; South Uist, long-stayer to at least 20th April. **Whiskered Tern** *Chlidonias hybrida* Shapwick Heath (Somerset), 24th-26th April. **White-winged Black Tern** *Chlidonias leucopterus* Brogborough Lake (Bedfordshire), 27th April.

Eurasian Scops Owl *Otus scops* Late news of one found dead at Bishop's Waltham (Hampshire), 2nd April. **Snowy Owl** *Bubo scandiacus* Whinnyfold, 3rd May, same, Rattray Head (both Northeast Scotland), 9th May.

Alpine Swift *Apus melba* Thorpeness (Suffolk), 17th April; Sheringham (Norfolk), 18th and 21st-22nd April, perhaps same, Cromer (Norfolk), 26th April; St Mary's (Scilly), 26th April; Weymouth (Dorset), 27th April; Louth (Lincolnshire), 28th April; Lymington (Hampshire), 3rd May; Kingsdown (Kent), 7th May; Margate, 9th May; Scarborough (North Yorkshire), long-stayer to 15th April. **Pallid Swift** *Apus pallidus* St Agnes (Scilly), 25th April. **European Bee-eater** *Merops apiaster* Bideford

(Devon), 30th April to 1st May; Portland (Dorset), 2nd May; Landguard (Suffolk), 2nd May; Wymondham (Norfolk), 3rd May; Freiston (Lincolnshire), 9th May; Dale (Pembrokeshire), 9th May.

Short-toed Lark *Calandrella brachydactyla* St Agnes, 22nd-23rd April; Fair Isle, 23rd-25th April; St Mary's, 28th April and 2nd May. **Red-rumped Swallow** *Hirundo daurica* At least 53 were reported between 5th April and 9th May, with six during 16th-18th April and 23 arriving between 29th April and 1st May. Multiple arrivals included two at Hay-a-Park Gravel-pits (North Yorkshire), two at Grove Ferry, two on Scilly; two at Lydney (Gloucestershire), three at Slapton Ley (Devon), two at Barton-on-

Humber (Lincolnshire) and two at Fairburn Ings (West Yorkshire). In detail: Cosmeston Lake (Glamorgan), 5th April; Hay-a-Park Gravel-pits, 7th-8th April, with two on 9th-10th April; Welton Water (East Yorkshire), 16th April; Low Barns (Co. Durham), 17th April; Spurn (East Yorkshire), 17th April and 2nd May; Gibraltar Point (Lincolnshire), 17th April; Abberton Reservoir (Essex), 18th April; Marton Mere (Lancashire), 18th-19th April; Bowling Green Marsh, 21st April; Bardsey (Gwynedd), 22nd April; Sandwich Bay (Kent), 22nd April; Grove Ferry, two, 23rd April; St Martin's (Scilly), 25th April and 2nd May; St Mary's, 26th-27th and 29th April, and 2nd May; Tresco (Scilly), 26th-27th and 30th April, 2nd-3rd and 7th May (some overlap in Scilly records, but at least two on 26th-27th); Holme (Norfolk), 27th April; Lydney, 28th-29th April, two on 30th April, and one to 5th May; Hanningfield Reservoir (Essex), 29th April; Hemel Hempstead

Graham Catley



180. Male Lesser Scaup *Aythya affinis*, Water's Edge Country Park, Lincolnshire, April 2004.

Steve Young/Birdwatch



181. Male Bufflehead *Bucephala albeola*, Pugney's Country Park, West Yorkshire, April 2004.



182. White Stork *Ciconia ciconia*, Barnton, Cheshire, May 2004. Spring 2004 may yet prove to herald the first breeding attempt by White Storks in Britain for several centuries (see page 310).

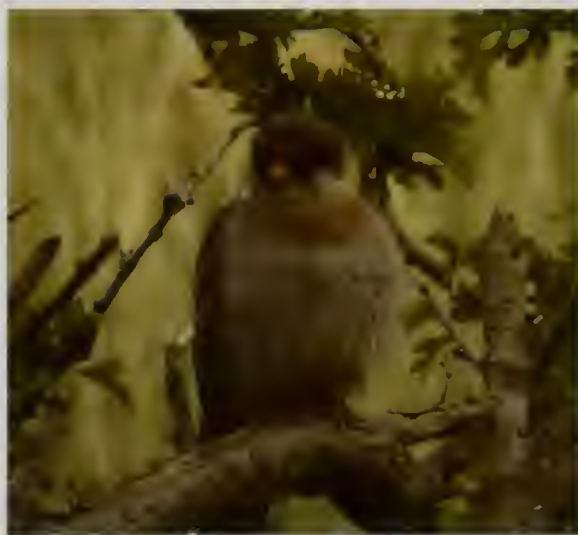
(Hertfordshire), 29th April; Regent's Park (London), 29th April; Gailey Reservoir (Staffordshire), 29th April to 1st May; Radipole Lake (Dorset), 30th April to 2nd May; Cuckmere Haven (East Sussex), 30th April; Holland Haven (Essex), 30th April; Hensol Lake (Glamorgan), 30th April; Monmouth (Gwent), 30th April; Northward Hill (Kent), 30th April; Loch of Hillwell (Shetland), 30th April; West Huntspill (Somerset), 30th April to 1st May; Thrybergh Country Park (South Yorkshire), 30th April to 1st May; Blithfield Reservoir (Staffordshire), 30th April; Earlswood Lakes (Warwickshire), 30th April to 1st May; Moor Green Lakes (Berkshire), 1st May; Slapton Ley, three on 1st May, two remaining to 4th May; Lodmoor (Dorset), 1st and 8th-10th May; Thrapston (Northamptonshire), 1st May; King's Fleet (Suffolk), 1st May; Flamborough (East Yorkshire), 3rd and 5th-6th May; Winterton (Norfolk), 3rd May; Coll (Argyll), 4th-5th May; Barton-on-Humber, two on 4th-7th May, one staying to 9th; Filey Dams (North Yorkshire), 4th May; Ouse Washes (Cambridgeshire), 6th May; Culverdown (Isle of Wight), 7th May; Dungeness (Kent), 8th-9th May; Fairburn Ings, two, 9th May. **Tawny Pipit** *Anthus campestris* Tresco, 24th April; Ballycotton (Co. Cork), 1st

May; St Mary's, 2nd May. **Citrine Wagtail** *Motacilla citreola* East Lane Lagoons (Suffolk), 9th-10th May.

Alpine Accentor *Prunella collaris* Overstrand (Norfolk), 20th April. **Thrush Nightingale** *Luscinia luscinia* Foula, 7th May; Isle of May (Fife), 9th-10th May. **Rock Thrush** *Monticola saxatilis* Blakeney Point (Norfolk), 1st May.

Blyth's Reed Warbler *Acrocephalus dumetorum* Portland, 11th May. **Great Reed Warbler** *Acrocephalus arundinaceus* Sandwich Bay, 2nd May. **Subalpine Warbler** *Sylvia cantillans* Sennen (Cornwall), 16th April, with three in the area on 17th April, two until 18th April, and one to 24th April; St Mary's, 16th-23rd April;

Hengistbury Head (Dorset), 17th April; Land's End (Cornwall), 19th-24th April; Nanquidno (Cornwall), 26th April; Portland, 30th April; Dungeness, 1st May; Fair Isle, 1st-2nd May; Severn Beach (Gloucestershire), 2nd May; St Agnes, 3rd and 6th-7th May; Fetlar (Shetland), 7th-9th May; Foula, 7th May; Noss (Shetland), 7th-8th May. **Pallas's Leaf Warbler** *Phylloscopus proregulus* Flamborough, 3rd and 6th May. **Yellow-browed Warbler** *Phylloscopus inornatus*



183. Male Red-footed Falcon *Falco vespertinus*, Waxham, Norfolk, May 2004.

Chris Galvin



184. Little Gull *Larus minutus*, Seaforth, Merseyside, April 2004. No fewer than 276 Little Gulls were present at Seaforth on 17th April, when this photo was taken.

Steve Young/Birdwatch



185. Presumed Iberian Chiffchaff *Phylloscopus ibericus*, Dibbinsdale, Cheshire, May 2004.

Deryk Shaw



186. First-summer male Collared Flycatcher *Ficedula albicollis*, Fair Isle, Shetland, May 2004.

Fetlar, 6th May; Bressay (Shetland), 8th May. **Hume's Warbler** *Phylloscopus humei* Brent Reservoir (London), 1st May; Fairlop (London), long-stayer to 25th April. **Dusky Warbler** *Phylloscopus fuscatus* Barrow Gurney Reservoir (Somerset), 1st May; Slimbridge (Gloucestershire), 2nd May; Clennon Valley (Devon), long-stayer to at least 1st May. **Western/Eastern Bonelli's warbler** *Phylloscopus bonelli/orientalis* Lundy (Devon), 26th April. **Iberian Chiffchaff** *Phylloscopus ibericus* Woodhorn (Northumberland), 18th-19th April; probable, Dibbinsdale (Cheshire), 30th April to 9th May.

Collared Flycatcher *Ficedula albicollis* Fair Isle, 9th-11th May. **Woodchat Shrike** *Lanius senator* Sennen, 19th April; Reculver (Kent), 19th-22nd April; Nanquidno, 20th-22nd April; Tresco, 23rd-25th April; Gwent Levels (Gwent), 24th April; Hengistbury Head, 2nd May.

European Serin *Serinus serinus* Portland, 5th, 6th, 8th, 12th, 17th, 18th (two), 22nd April and 2nd May; Dungeness, 5th April; Hengistbury Head, 8th, 14th and 17th April; South Foreland (Kent), 11th April; Pagham Harbour (West Sussex), 14th April; Nanjizal, 16th April; Shoeburyness (Essex), 17th April; Unst (Shetland), 17th-27th April; Nanquidno, 27th April; Sittingbourne (Kent), 28th April; St Agnes, 1st May; Sandwich Bay, 3rd May; St Mary's, 3rd May; Exmouth (Devon), 11th May. **Arctic Redpoll** *Carduelis hornemanni* Foula, 5th-7th May. **Little Bunting** *Emberiza pusilla* Nanjizal, 2nd May.



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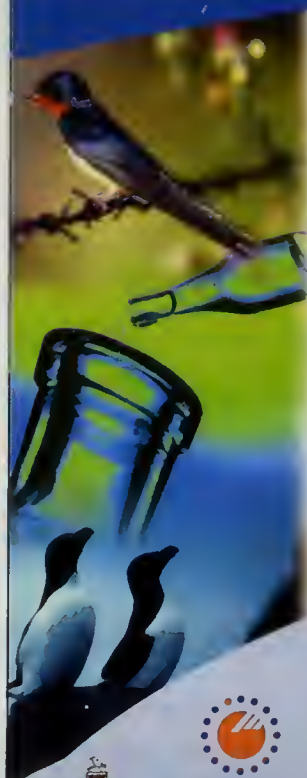
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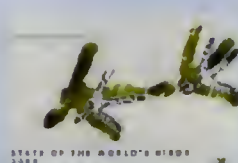
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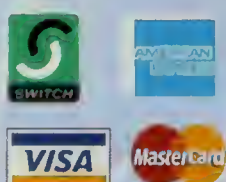
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